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ARMSTRONG  
LABORATORY

**SONIC BOOMS PRODUCED BY UNITED STATES  
AIR FORCE AND UNITED STATES NAVY  
AIRCRAFT: MEASURED DATA**

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BIODYNAMICS AND BIOENGINEERING DIVISION**

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**AIR FORCE SYSTEMS COMMAND  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433-6573**

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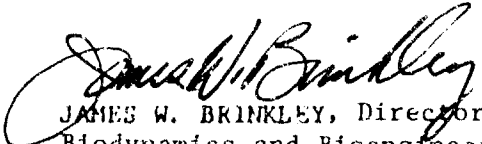
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FOR THE COMMANDER

  
JAMES W. BRINKLEY, Director  
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## PREFACE

This report is a technical manual describing the BOOMFILE database acquired by the Biodynamic Environment Branch of the Armstrong Laboratory (Det 1 AL/BBE) in August 1987 at Edwards Air Force Base. This study was conducted under Task 723134, "Exploratory Noise and Sonic Boom Research." Partial funding for this effort was received from the Noise and Sonic Boom Impact Technology (NSBIT) advanced development program office under Project 3037.

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## INTRODUCTION

The problem of sonic booms produced by military aircraft is a growing concern for both the Air Force and the general population. Current Air Force and Navy aircraft are faster, and new operational scenarios require larger operating areas to realistically train for combat conditions. As a consequence, more sonic booms are being produced, and their impact must be evaluated. In 1973 the United States government passed the National Environmental Policy Act, 42 U.S.C. Statutes 4321-4361. This act requires the USAF to submit an Environmental Impact Statement (EIS) for any new operations that may adversely impact the environment. Therefore, reference sonic boom data are essential to the understanding of the impact of sonic boom on the environment and are needed in EIS's to verify the magnitudes of sonic boom overpressures produced by US military aircraft.

In 1987 at Edwards AFB, the USAF conducted a series of supersonic flight tests on eight different USAF and USN aircraft. These aircraft flew controlled supersonic flight profiles at various altitudes and Mach numbers (Ma). Sonic boom monitors were deployed to obtain overpressure signatures at various lateral distances from the ground track. These captured sonic boom signatures provide the needed reference data of overpressures produced by US military aircraft and have been compiled into the BOOMFILE database.

The goal of this report is to summarize the BOOMFILE database and the parameters which affect sonic boom impacts. The BOOMFILE database contains the necessary data that can be used to validate single event sonic boom prediction models used in EIS's. These models are used to evaluate proposed supersonic operations and to minimize any sonic boom impact on the environment.

This report includes a description of the test, the measured data, and an analysis of the results. The data (i.e. flight tracks, weather profiles, and sonic boom signatures) are contained in the appendices. These data are also available on floppy disks from the Biodynamic Environment Branch of the Armstrong Laboratory:

Det 1 AL/BBE  
Area B Bldg 441  
Wright-Patterson AFB OH 45433-6573  
Phone: (513) 255-3664, FAX (513) 255-2781.

## TEST DESCRIPTION

The sonic boom measurements were conducted 31 July to 7 August 1987 east of Edwards AFB under the low altitude supersonic corridor 14 miles north of Kramer's Junction, CA. Each aircraft flew straight and steady supersonic flight tracks at various altitudes and Mach numbers. An array of 22 sonic boom monitors was set perpendicular to the target flight. The Air Force Flight Test Center Range Control Technical Service Office (AFFTC/ENRCS) at Edwards AFB provided radar tracking for each aircraft flight. The 6510th Test Wing Weather Office (6510TW/ENS) provided weather data from rawinsonde launches and ground station data at the test site. NASA-Dryden personnel provided critical communication between radar tracking at Ridley Control, Base Operations and the noise measurement team. They also assisted in the logistics support for this test.

The site locations for the array of monitors and the ground track of the target flight path are shown in Figure 1 and described in Table 1. The first type of monitor is the Boom Event Analyzer Recorder (BEAR) developed by Det 1 AL/BBE. The second type is a modified Larson Davis LD700 Personal Dosimeter Designated SBM-1. The third type is a monitor developed by the National Aeronautics and Space Administration (NASA) Houston Division. Data which was collected by the NASA monitors are not included in this report. These monitors were placed in a linear array which was set perpendicular to the flight ground track. Seven monitors were located north of the flight track at distances up to six miles. Five monitors were located under the flight track. The remaining seventeen monitors were located south of the flight track at distances up to 18 miles. The monitors were placed at the mile markers along US Highway 395. Accordingly, each site number was identified by the associated mile marker (i.e. site 50 was located at mile marker 50). The intersection of the array with the ground track was located at 35° 11' 00" N latitude and 117° 35' 50" W longitude which corresponded to a site location of 59.8. Two monitors, a BEAR and a SBM-1, were positioned at this intersection and were identified as site 00 and 02, respectively. One BEAR was placed 100 ft. uptrack from the intersection and is identified as site 01. Also, a SBM-1 monitor was positioned four miles uptrack from this intersection and is identified as site 09. The aircraft flew in a westerly direction and reached steady flight conditions at a point several miles prior to the monitor array. This arrangement enabled the measurement of the carpet boom at various lateral distances that extended past the lateral cutoff for most of the aircraft flights.

The BEAR units capture the full sonic boom overpressure signatures and store them in a digital format. This data can then be directly transferred to an IBM-PC microcomputer for data analysis. The physical description and operation of these BEAR's are documented in " Boom Event Analyzer Recorder (BEAR): System Description," AAMRL-TR-89-035, August 1989 (ref 1), and a summary description is provided in Appendix A. The BEAR units are unmanned remote monitors which were validated in a comparison study with NASA's manned units in 1986. This comparison study is described in the published report: "Air Force Boom Event Analyzer Recorder (BEAR): Comparison with NASA Boom Measurement System," AAMRL-TR-88-039, July 1988 (ref 2). The Larson-Davis monitors, LD-700 dosimeters, are modified to measure the peak overpressure and the following energy metrics of a sonic boom: C-weighted Sound Exposure Level (CSEL) and A-weighted Sound Exposure Level (ASEL). A physical description of these monitors is also given in Appendix A.

As an aircraft flies faster than the speed of sound, shock waves are formed that can propagate to the ground. This group of shock waves is identified as a sonic boom. The aircraft must exceed a critical speed known as the cutoff Mach number (Mc) for the sonic boom to reach the ground. The Mc varies according to the flight altitude and weather conditions. The following target flight conditions were used for this test to ensure that the aircraft exceeded Mc and produced a measurable sonic boom at the monitor sites:

Aircraft	Altitude (Ft MSL)	Ma
F-4, F-15, F-16, F-111, F-18, F-14	10k	1.2
	25k	1.3
	40k	1.4
T-38	10k	1.1
	25k	1.15
	35k	1.25
SR-71	60k	2.0
	80k	3.0.

These target flight conditions also represent typical operational conditions at most Air Force supersonic military operating areas (MOA's).

The physical dimensions of these aircraft are shown in Figures 2a-2h. These scaled diagrams provide the data necessary to generate proper aircraft shape factor parameters used in sonic boom prediction programs.

Each aircraft flew several typical operational flight profiles to ascertain the effects of altitude and Mach number on their sonic boom production. The approximate steady state flight conditions for each flight are given in Table 2 where the altitudes are expressed in thousands of feet above mean sea level (K MSL).

Table 1. Location of Monitors

Mile Marker	Site Alt. (Ft. MSL)	BEAR Site # Serial #	SBM-1 Site # Serial #	NASA Monitor
66	3040	66	1004 01	A0169
65	3000			N
64	2960	64	1011	
63	2940			N
62	2920	62	1012	
61	2900	61	1003	
59.8	2800			
Array center	2800	00	1010 02	A0152
100' Uptrack	2800	01	1001	
4 mi Uptrack	2800		09	A0153
59	2800	59	1006	
58	2800	58	1008	
57	2800			N
56	2780	56	1009	
55	2780		03	A0159
54	2760	54	1013	
53	2700		04	A0164
52	2700	52	1005	N
51	2560		05	A0166
50	2600	50	1007	
48	2500	48	1002 06	A0151
46	2450			N
44	2560		07	A0157
42	2680		08	A0150



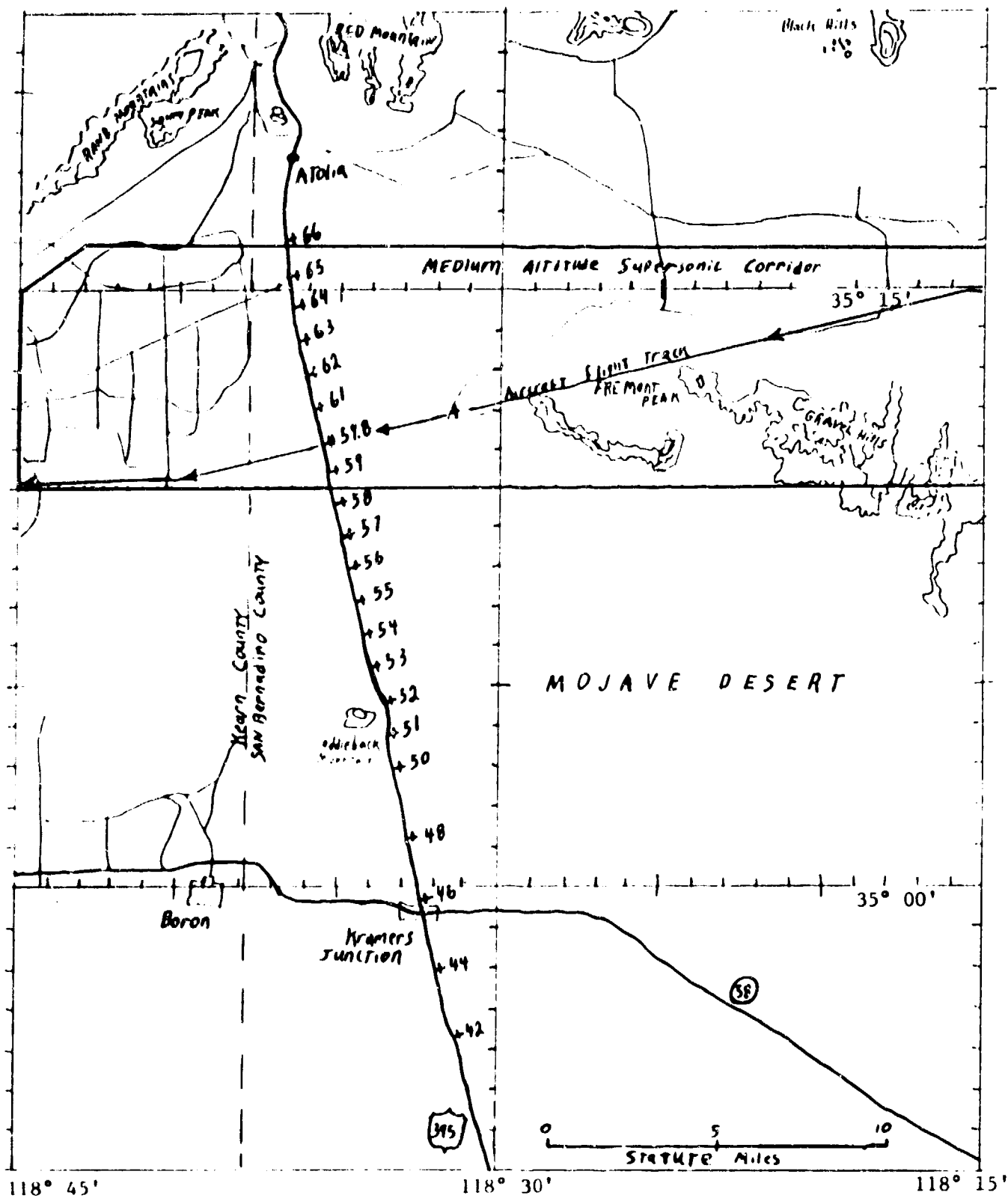
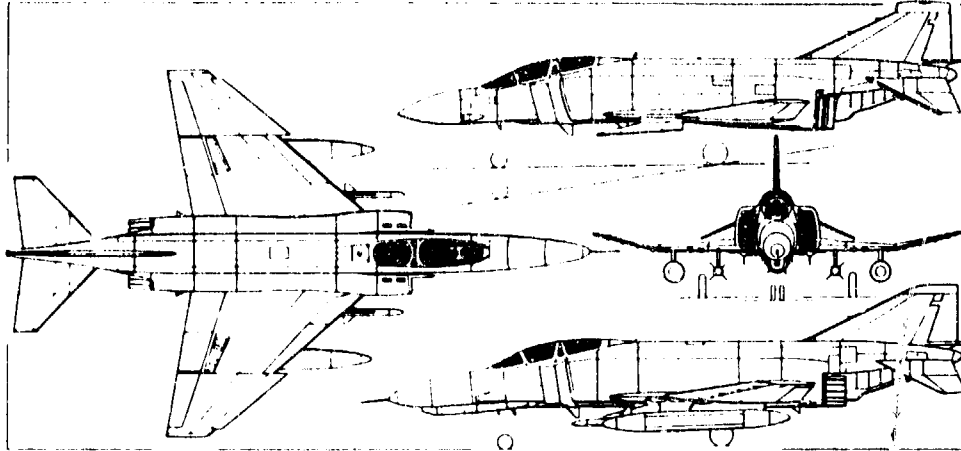
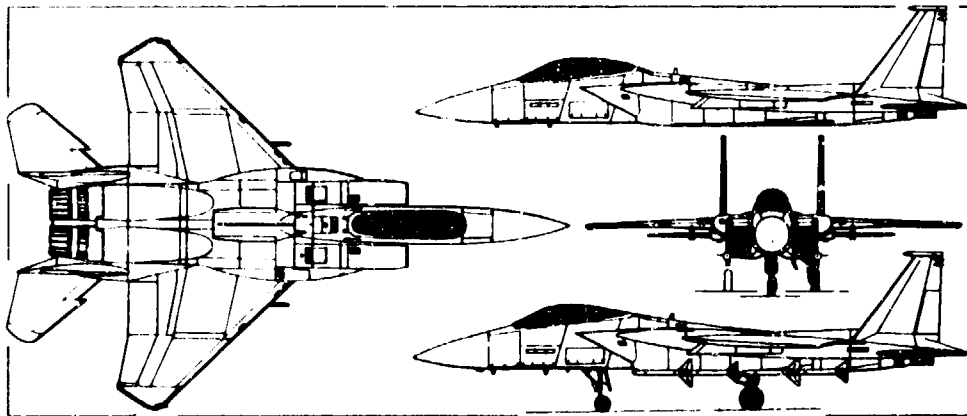


Figure 1. Test Site and Monitor Locations



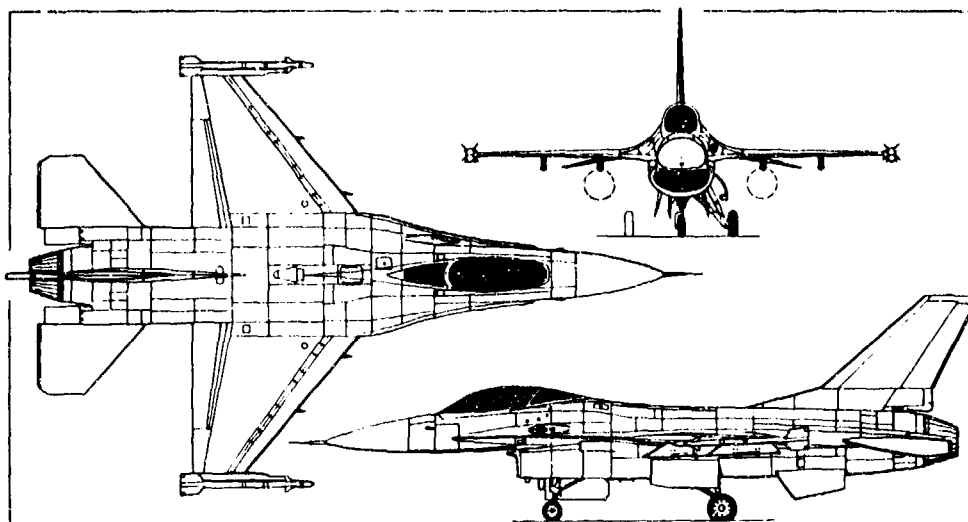
Aircraft:	F-4	Height:	16.5 ft
Name:	Phantom II	Wing Span:	38.6 ft
Engines:	(2) J79-GE-17	Wing Area:	530 sq ft
Thrust Per Engine:	17,820 lbs	Empty Weight:	29,500 lbs
Length:	63.0 ft	Gross Weight:	58,000 lbs

Figure 2a. F-4 Dimensional Drawing



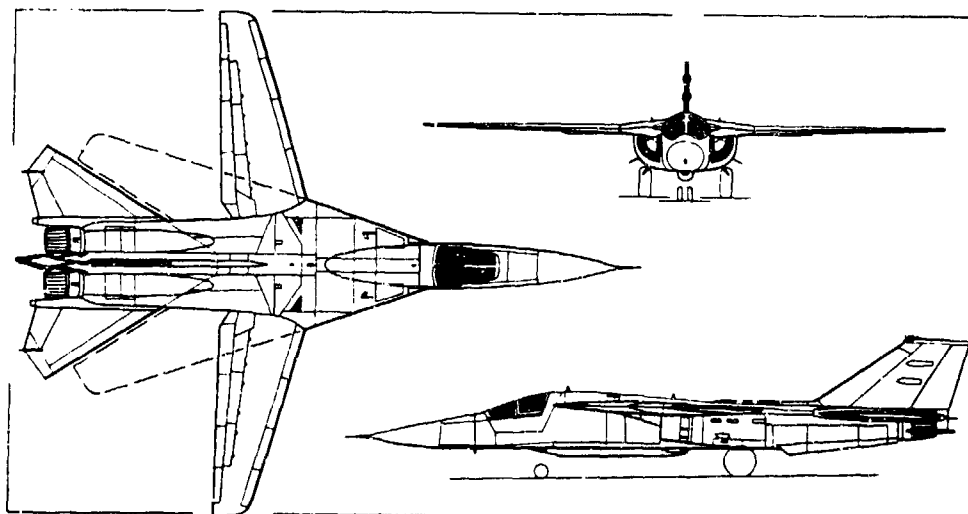
Aircraft:	F-15	Height:	18.5 ft
Name:	Eagle	Wing Span:	42.8 ft
Engines:	(2) F-100-PW-100	Wing Area:	608 sq ft
Thrust Per Engine:	25,000 lbs	Empty Weight:	28,500 lbs
Length:	63.8 ft	Gross Weight:	44,500 lbs

Figure 2b. F-15 Dimensional Drawing



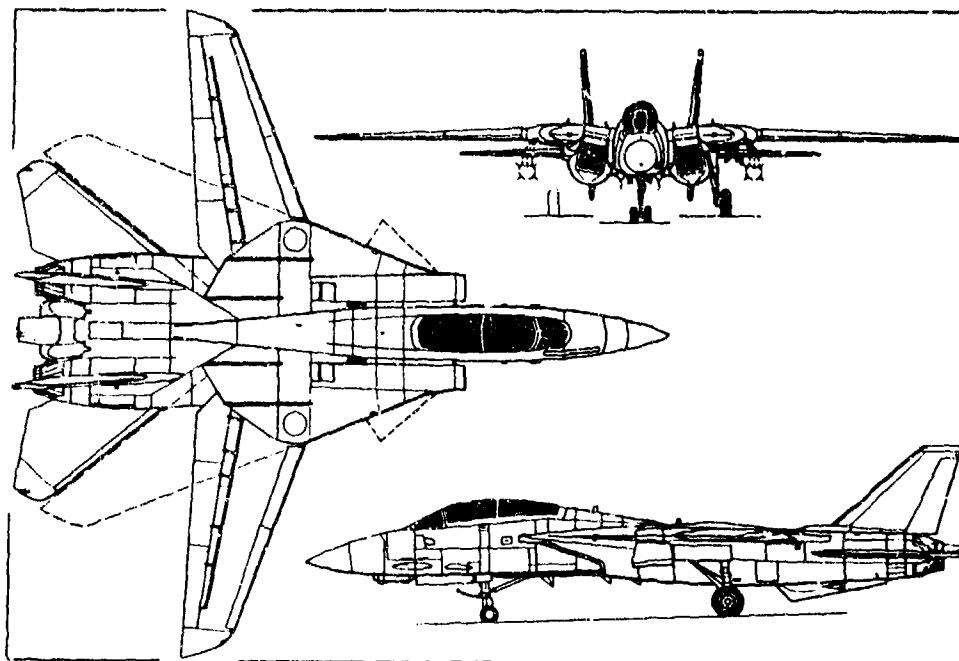
Aircraft:	F-16	Height:	16.4 ft
Name:	Fighting Falcon	Wing Span:	31.0 ft
Engines:	(1) F100-PW-200	Wing Area:	300 sq ft
Thrust Per Engine:	25,000 lbs	Empty Weight:	15,140 lbs
Length:	47.6 ft	Gross Weight:	23,360 lbs

Figure 2c. F-16 Dimensional Drawing



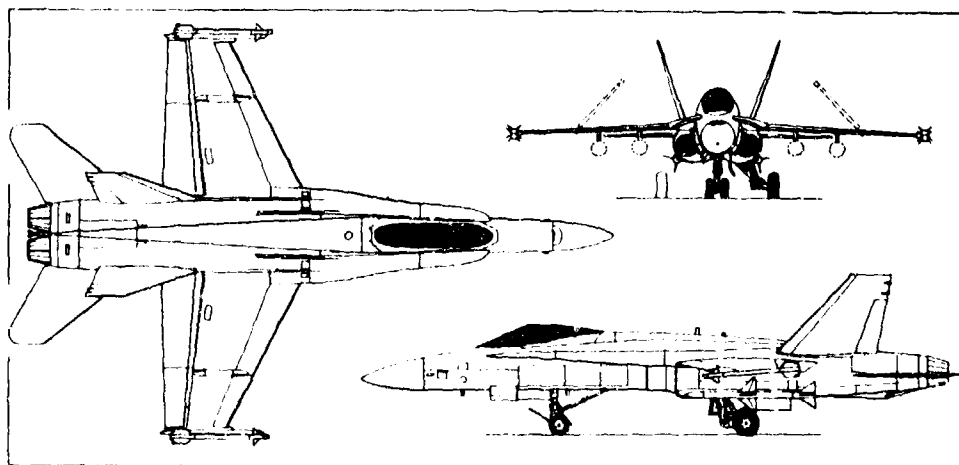
Aircraft:	F-111D	Height:	17.0 ft
Name:		Wing Span:	63.0/32.0 ft
Engines:	(2) TF30-P-100	Wing Area:	525 sq ft
Thrust Per Engine:	25,100 lbs	Empty Weight:	47,000 lbs
Length:	75.5 ft	Gross Weight:	100,000 lbs

Figure 2d. F-111D Dimensional Drawing



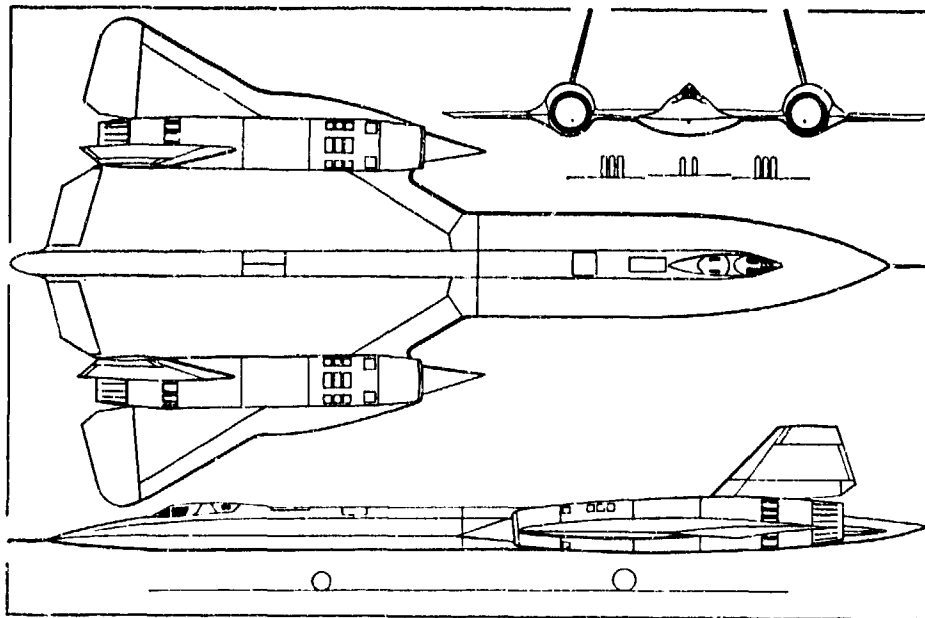
Aircraft:	F-14	Height:	16.0 ft
Name:	Tomcat	Wing Span:	64.1/39.5 ft
Engines:	(2) TF30-P-414	Wing Area:	565 sq ft
Thrust Per Engine:	20,900 lbs	Empty Weight:	39,700 lbs
Length:	62.7 ft	Gross Weight:	59,370 lbs

Figure 2e. F-14 Dimensional Drawing



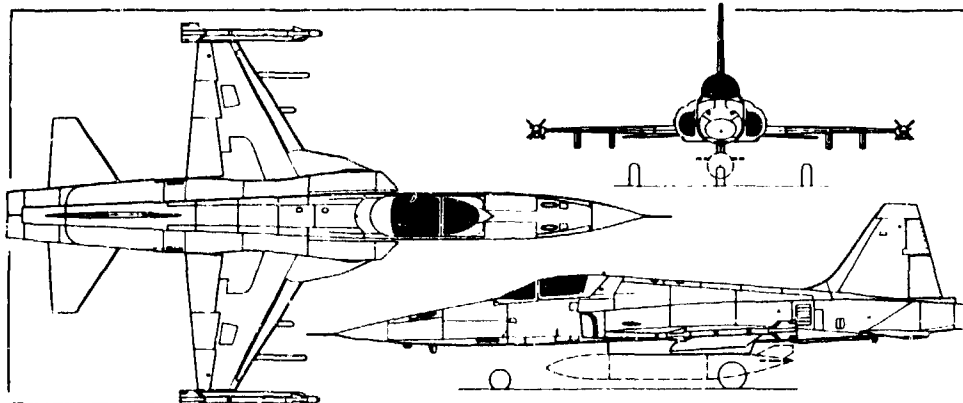
Aircraft:	F-18	Height:	15.3 ft
Name:	Hornet	Wing Span:	37.5 ft
Engines:	(2) F404-GE-400	Wing Area:	400 sq ft
Thrust Per Engine:	16,000 lbs	Empty Weight:	21,800 lbs
Length:	56.0 ft	Gross Weight:	35,000 lbs

Figure 2f. F-18 Dimensional Drawing



Aircraft:	SR-71	Height:	18.5 ft
Name:	Blackbird	Wing Span:	55.6 ft
Engines:	(2) JT110-PW-20B	Wing Area:	
Thrust Per Engine:	34,000 lbs	Empty Weight:	60,000 lbs (est)
Length:	107.4 ft	Gross Weight:	170,000 lbs (est)

Figure 2g. SR-71 Dimensional Drawing



Aircraft:	T-38	Height:	12.9 ft
Name:	Talon	Wing Span:	25.3 ft
Engines:	(2) J85-GE-5A	Wing Area:	170 sq ft
Thrust Per Engine:	3,850 lbs	Empty Weight:	7410 lbs
Length:	46.3 ft	Gross Weight:	11760 lbs

Figure 2h. T-38 Dimensional Drawing

Table 2. BOOMFILE Flight Conditions Summary

DATE	AIRCRAFT	FLIGHT TRACK INTERSECTION NUMBER	MACH	ALTITUDE (Ft MSL)	BOOM AT SITE 00 (Local Time)
31 JUL 87	F-4 *	57.8	1.20	16000	08:41:20
03 AUG 87	F-4	60.1	1.24	29200	07:48:33
	F-4	60.6	1.29	29300	07:58:33
	F-4	53.6	1.10	13000	08:08:04
	F-4	59.2	1.10	14400	10:29:59
	F-4	61.3	1.37	44400	10:43:22
	T-38	58.6	1.00	13600	10:05:35
	T-38	56.0	1.10	13000	10:12:15
	T-38	59.5	1.11	29600	12:28:18
	T-38	60.5	1.05	21200	12:38:17
04 AUG 87	AT-38	60.0	1.17	41400	07:19:41
	AT-38	60.0	1.12	32300	07:30:09
	AT-38	63.0	1.15	16700	07:36:46
	AT-38	59.6	1.20	30300	09:14:06
	AT-38	59.0	1.10	14000	09:23:15
	F-15	61.5	1.38	41400	07:56:42
	F-15	60.3	1.20	29700	08:04:06
	F-15	60.6	1.10	12500	08:10:13
	F-15	60.0	1.13	15200	10:46:15
	F-15	59.0	1.28	31000	11:02:18
	F-15	64.0	1.42	45000	11:11:28
	F-15	60.0	1.40	45500	11:34:21
05 AUG 87	F-16	57.0	1.25	29500	09:06:05
	F-16	60.0	1.43	46700	09:33:54
	F-16	58.8	1.17	19300	09:44:51
	F-16	59.5	1.13	14400	11:44:24
	F-16	60.6	1.12	13800	11:54:39
	F-16	60.5	1.25	30000	12:04:46
	SR-71	60.8	2.50	64800	09:26:12
	SR-71 *	59.8	3.00	73000	10:55:12
	SR-71	59.4	1.23	32400	11:08:38
	SR-71	62.0	1.70	52000	12:35:51
06 AUG 87	F-18	60.0	1.30	30000	07:44:12
	F-18	59.6	1.40	44700	07:57:05
	F-18	58.0	1.10	14200	08:10:36
	F-18	59.8	1.30	30000	10:22:47
	F-18	59.8	1.43	45000	10:34:14
	F-18 *	59.8	1.10	13000	10:48:38
	F-14	56.2	1.20	31500	08:28:45
	F-14	62.0	1.27	16500	10:43:43
	F-111D	59.8	1.20	14000	11:48:18
	F-111D	59.8	1.40	45000	12:04:44
07 AUG 87	F-111D	58.3	1.25	29900	10:50:26

For each of these flights, except where noted by an asterisk, tracking data are provided in Appendix B. An example of this tracking data is given in Table 3. Note, the tracking data are provided at one second intervals and include ground position, altitude, Ma, flight path angle, climb/dive angle, and other pertinent flight information. Figure 3 contains a three dimensional plot of the aircraft position with line projections in both the XZ plane and the XY plane which show the aircraft altitude and ground track, respectively. Note, the Z axis has been scaled to emphasize the altitude variations and is not drawn to the same scale as the X and Y axes. The locations of the BEAR's and an overlay of the Ma versus distance along the ground track are included in this plot. Note, the dots on the flight track

and the Mach plot are equal in time and represent a 10 second time lapse. These plots demonstrate the relative steadiness of each flight path.

Table 3. Tracking Data File

F-4 AT 1.24M AT 29.2K MSL  
BOOM AT SITE 00 AT 0748 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:46:20	1.120	149645.	-349.	28661.	2.5	0.1045	258.
7:46:21	1.124	148502.	-322.	28712.	2.4	0.1029	258.
7:46:22	1.127	147356.	-296.	28760.	2.3	0.0852	258.
7:46:23	1.130	146207.	-272.	28805.	2.1	0.0536	258.
7:46:24	1.131	145056.	-249.	28847.	1.9	0.0239	258.
7:46:25	1.132	143904.	-227.	28885.	1.7	0.0116	258.
7:46:26	1.132	142751.	-204.	28916.	1.4	0.0273	258.
7:46:27	1.134	141597.	-180.	28941.	1.0	0.0608	258.
7:46:28	1.136	140441.	-154.	28959.	0.7	0.0931	258.
7:46:29	1.140	139282.	-128.	28970.	0.4	0.1021	258.
7:46:30	1.143	138120.	-102.	28976.	0.2	0.0881	258.
7:46:31	1.145	136955.	-75.	28978.	0.1	0.0634	258.
7:46:32	1.147	135788.	-47.	28980.	0.1	0.0421	258.
7:46:33	1.148	134619.	-19.	28984.	0.2	0.0427	258.
7:46:34	1.150	133450.	10.	28989.	0.3	0.0628	258.
7:46:35	1.152	132278.	40.	28998.	0.5	0.0782	258.
7:46:36	1.154	131104.	71.	29009.	0.6	0.0766	258.
7:46:37	1.156	129927.	102.	29021.	0.6	0.0499	258.
7:46:38	1.157	128749.	134.	29033.	0.6	0.0072	258.

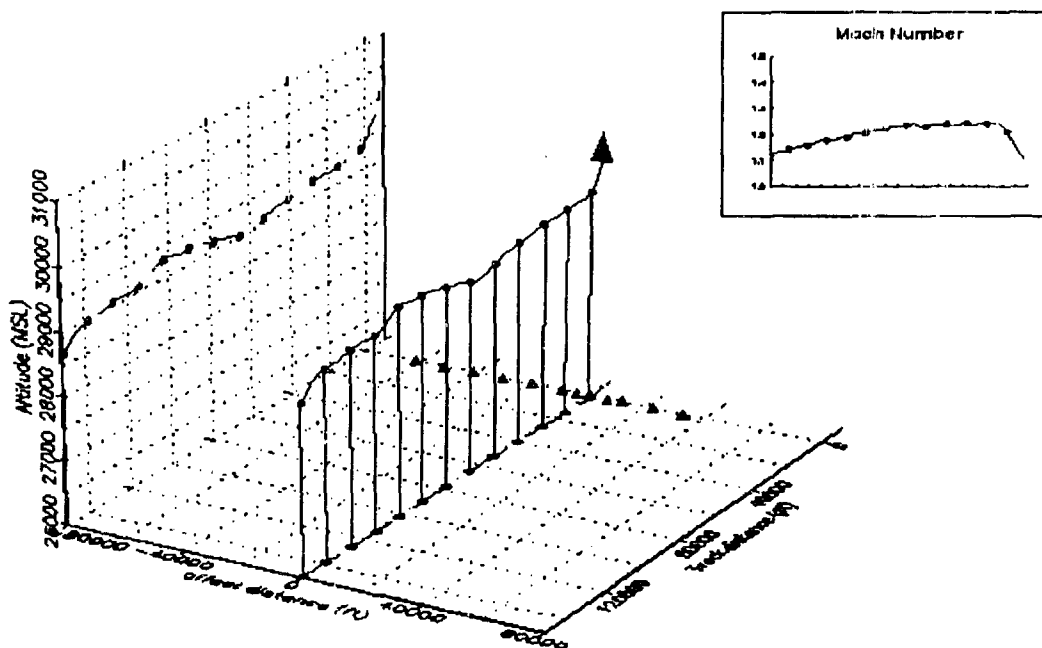


Figure 3. Plot of Aircraft Flight Track

The condition of the atmosphere is an important parameter in the propagation of a sonic boom. Weather data were recorded on the ground and at altitude during the study. The weather data at altitude were obtained from three daily rawinsonde launches at the base weather station, and ground station weather data were measured at site 00 after each sonic boom was heard. Examples of the rawinsonde and ground station weather data are listed in Tables 4a and 4b, respectively. Appendix C contains the complete weather data for this test.

Table 4a. Example of Rawinsonde Weather Data

7 AUG 87					1625 ZULU		
ALT	ATMOSPHERIC			REL	WIND	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	DIRECTION	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(° T North)	(Kts)	(Kts)
2372.	1940.27	31.2	4.1	18.	240.00	15.	681.
3000.	1899.02	29.1	2.2	17.	237.00	16.	678.
4000.	1834.82	25.6	-0.2	18.	229.00	16.	674.
5000.	1772.08	24.5	-2.3	16.	230.00	9.	673.
6000.	1711.13	22.0	-3.5	17.	234.00	7.	670.
7000.	1651.90	20.7	-6.7	15.	216.00	9.	668.
8000.	1594.42	18.8	-8.4	14.	204.00	10.	666.
9000.	1538.58	16.8	-9.9	15.	191.00	8.	664.
10000.	1484.38	15.2	-8.3	18.	163.00	8.	662.
11000.	1431.75	12.6	-3.4	32.	143.00	8.	659.
12000.	1380.53	10.1	-1.2	46.	134.00	5.	657.
13000.	1330.76	7.5	-0.2	58.	126.00	4.	654.
14000.	1282.39	5.2	-0.1	68.	135.00	6.	651.
15000.	1235.46	3.4	-0.1	77.	131.00	8.	649.
16000.	1190.00	1.8	-2.4	73.	122.00	7.	647.
17000.	1145.82	-0.5	-8.1	56.	105.00	5.	644.
18000.	1102.97	-1.9	-11.6	47.	90.00	3.	642.
19000.	1061.61	-2.2	-18.4	28.	36.00	5.	642.
20000.	1021.66	-3.4	-24.7	17.	20.00	11.	640.

Table 4b. Example of Ground Station Weather Data

EVENT	TIME	TEMPERATURE	BAROMETRIC	WIND SPEED	WIND DIRECTION
	(Local)	(°C)	PRESSURE	(Knots)	Degrees from
			(In Hg)		Magnetic North
-----					
6 AUG 87					
Pre-test	0734	26.1	29.93	1-2	090-120
F-18 at 30 KMSL	0744	26.7	29.93	1-2	080-100
F-18 at 45 KMSL	0755	27.8	29.93	1-2	080-100
F-18 at 14 KMSL	0810	28.3	29.94	1-3	060-090
F-14 at 32 KMSL	0828	28.9	29.94	2-3	020-060
F-18 at 30 KMSL	1022	34.4	29.94	1-3	070-090



## DATA ANALYSIS

### Signature Classification

In the analysis of sonic booms, signatures can be classified into three basic groups to aid in the identification of atmospheric and propagation effects. A brief discussion of this classification is provided, but the classification of the BOOMFILE signatures is not provided in this report. Figure 4 is an example of an 'N-wave' sonic boom overpressure signature. This signature was produced by an F-4 traveling at 1.29 Ma at 29.3 kft MSL. This signature shows the pressure as a function of time and exhibits the typical N shape characteristic of a far field sonic boom produced by steady supersonic flight. The initial part of the pressure waveform has a sharp rise which is the leading shock wave of the sonic boom. This shock is followed by a near linear decrease in the pressure until the trailing shock is encountered. At the final portion of the waveform, the pressure returns to its ambient value.

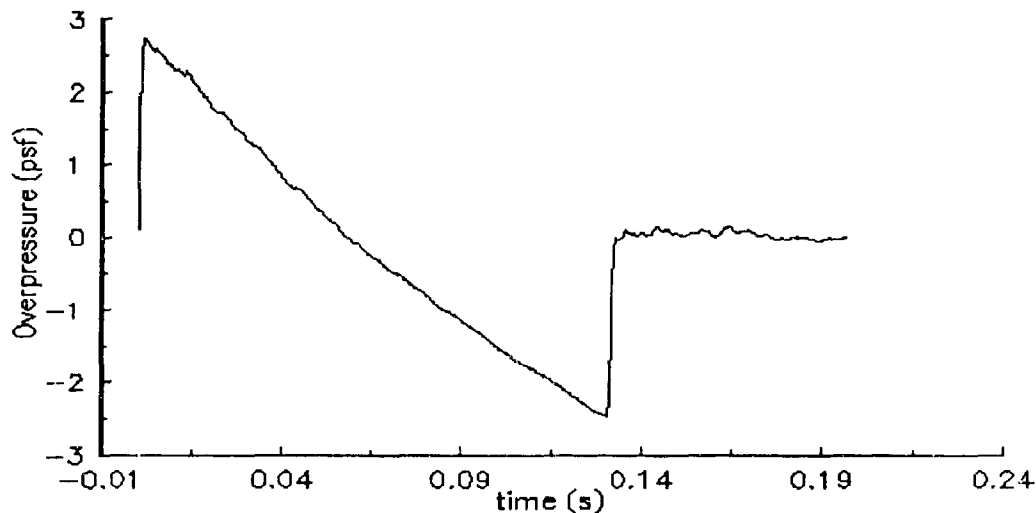


Figure 4. Example of an 'N-wave' Sonic Boom Signature

Atmospheric variability and long propagation paths can cause variation in this basic 'N-wave' shape (ref 3: Maglieri, 1968 and ref 4: Pierce and Maglieri, 1971). Due to these variations, the propagated 'N-wave' can be typically classified into three groups: normal, rounded, and peaked (ref 3). Figure 5 demonstrates these variant shapes of the 'N-wave' signature. This grouping allows for an analysis of the atmospheric effects on the overpressures produced by supersonic flights.



Figure 5. Classification of 'N-waves'

Another class of sonic boom signatures is the 'U-wave' which is caused by focusing of the sonic boom. A focus arises from aircraft maneuvers such as acceleration, push-over, and turning or from refraction of the boom near lateral cutoff. Figure 6 shows an example of a focused boom signature near lateral cutoff produced by a F-4 flying at 1.1 Ma at 13 kFt MSL. A 'U-wave' is characterized by two sharp positive pressure peaks, corresponding to the two shocks in the original N-wave, with the second peak rising above the ambient pressure and loss of the linear decrease between the two shocks. There can also be combinations of N and U waves when the boom impact is near a focal point. An example of a combination signature is shown in figure 7.

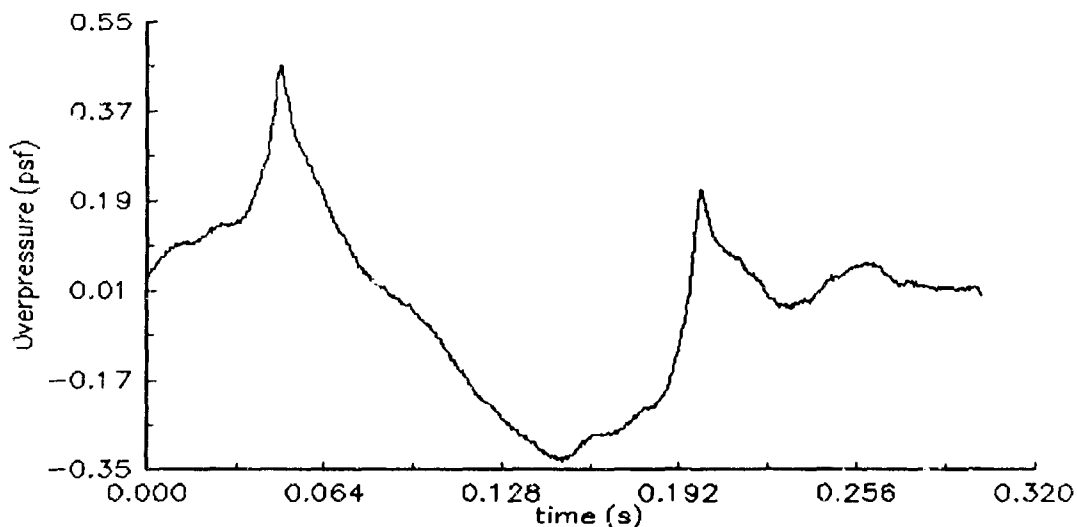


Figure 6. Example of an 'U-wave' Sonic Boom Signature

The overpressure signatures obtained at each site are contained in Appendix D. The signatures are organized by aircraft and flight time. An example of these plots is provided in figure 8. The x-axis is time displayed in seconds. The y-axis gives the site location for each of the signatures, which are separated by the relative distance between sites. Note, the propagation real time lags have been removed so all booms are shown in relative time. For each flight the pressure amplitudes are plotted on a

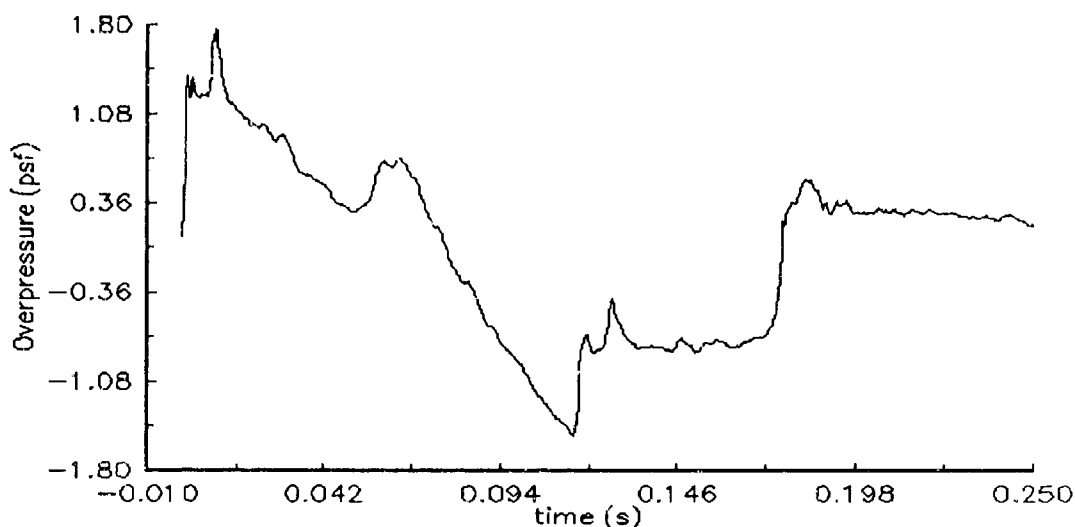


Figure 7. Example of an 'NU-wave' Combination Signature

consistent scale, and the actual peak overpressures for each signature can be found in Table 5. The series of signatures in figure 8 was produced by an F-4 flying at 1.24Ma at 29.2 kFt MSL. The ground track of this flight intersected the monitor array at the 60.1 mile mark. The peak overpressure at site 58 is 3.6 psf. This series clearly demonstrates the effect that lateral spreading has on the sonic boom signature. As the boom propagates laterally from the flight track, the signal lengthens and the peak overpressure decreases. This spreading effect can clearly be seen at site 64 and 52 where the boom signature is longer in duration and the shape has become rounded.

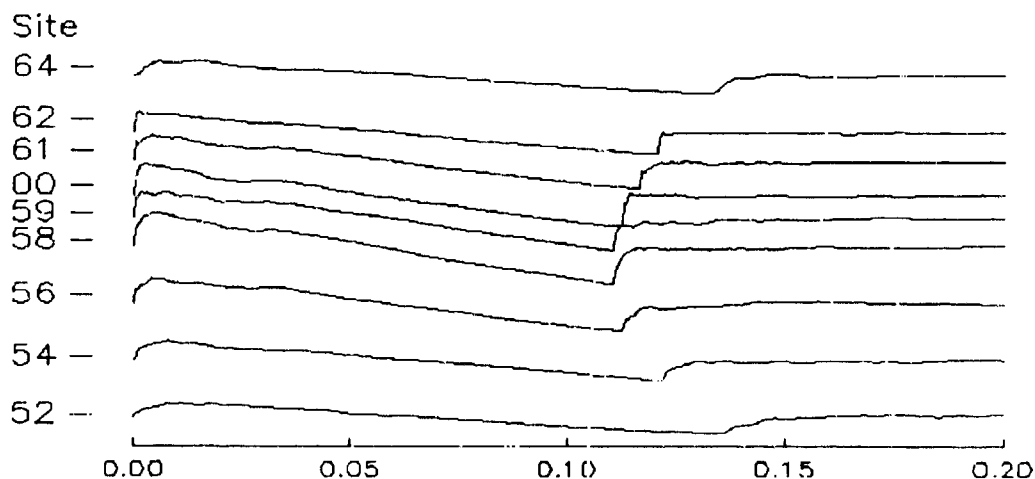


Figure 8. Example of Lateral Spreading of a Carpet Boom

### Summary of Overpressures

A constant offset from measured peak overpressures is often used to estimate the total energy measures of the boom for analysis of structural impacts and human response. To quantify the impact of sonic booms, it is helpful to have a single parameter of the boom which can be directly related to its effects. Most studies in the past have concentrated on the peak overpressure as the best overall measure of the impact of a sonic boom on the environment. Table 5 lists the peak overpressures, in pounds per square foot (psf), measured by the BEAR monitors during this test.

The Committee on Hearing, Bioacoustics, and Biomechanics in a 1981 report (ref 5) recommended using the CSEL to evaluate human response to sonic booms and other high energy impulsive sounds. An offset from the overpressure of 26 dB has been proposed to estimate this metric which describes the total energy of the sonic boom. Table 6 shows the difference between the CSEL and the peak overpressures, as expressed in dB (re 20 microPascals). Two comparisons are presented. The first comparison uses all the measured data, and the second one excludes non "N-wave" data which are near the lateral cutoff point. The mean arithmetic difference from all data points as shown in Table 6 is 26.3 with a standard deviation, (sd), of 1.4 and is 26.3 with a sd of 1.1 from Table 6 when excluding the near cutoff data, which is denoted by an asterisk. Thus, this data verifies that the CSEL value of a carpet boom can be estimated by subtracting 26 from the given peak overpressure when it is expressed in dB with reasonable confidence.

Others have proposed using ASEL to evaluate human response to sonic booms. This metric does not provide as good of a correlation with the peak overpressure. This lack of correlation can be shown by comparing the ASEL to the peak overpressure in the above manner. Table 7 provides the difference between the ASEL and the peak overpressure, as expressed in dB (re microPascals). The mean arithmetic difference between the peak overpressure and the ASEL value for all data points is 44.6 with a sd of 4.1. The mean arithmetic difference from Table 7 when excluding the near cutoff data, which is denoted by an asterisk, is 45.2 with a sd of 3.4. These large standard deviations show that the ASEL metric does not correlate very well with carpet boom peak overpressures. Appendix E provides a full summary of peak overpressures, ASEL, and CSEL values for this study.

Table 5. BOOMFILE Summary of Peak Overpressures (PSF)

AIRCRAFT	TIME, DATE	BEAR MILE MARKER												
		66	64	62	61	00	01	59	58	56	54	52	50	48
F-4	8:41,7/31		1.6	2.2	2.7	3.4	3.1	2.7	3.6	2.6	1.9	1.4	0.7	0.1
F-4	7:48,8/3		1.0	1.9	2.1	2.6	2.2	2.0	2.5	1.2	1.7	0.1		
F-4	7:58,8/3	0.9	1.4	2.7	2.7	2.9	3.0	2.7	2.2	1.6	1.0	0.8	0.9	
F-4	8:08,8/3	0.3		0.3	0.3		0.2		0.5	0.3	0.3			
T-38	10:05,8/3					0.1	0.1	0.1	0.1					
T-38	10:12,8/3		0.1	0.2	0.2				0.6	0.7				
F-4	10:29,8/3	0.6	1.2	2.6	3.2	13.0	4.7	7.1	3.8	2.0	1.1			
F-4	10:43,8/3	0.2			3.6	1.7	1.7	1.3	1.5	0.8	0.3			
T-38	12:28,8/3							0.1						
T-38	12:38,8/3	0.1		0.7	0.5	0.7		0.5	0.3					
AT-38	7:19,8/4	0.3	0.3	0.4	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3	0.4
AT-38	7:30,8/4	0.3	0.4	0.4	0.4	0.5	0.5	0.7	0.3	0.3	0.3	0.6		
AT-38	7:36,8/4	0.4	0.7	0.9	0.8	0.6	0.6	0.7	0.5	0.3	0.1	0.1	0.1	
F-15	7:56,8/4	0.8	1.3	1.4	1.4	1.4	1.3	0.9	1.1	1.2		2.5	0.3	0.2
F-15	8:04,8/4	1.7	1.3	2.1	1.6	1.8	1.8	1.6	1.8	1.4		1.0	0.3	0.4
F-15	8:10,8/4	1.0	2.4	3.3	3.4	3.4	3.2	3.4	2.0	1.5	0.9	0.1		0.1
AT-38	9:14,8/4	0.4	0.4	0.9	0.7	0.7	0.7	0.8	0.7	1.4	0.6	0.5	0.2	0.2
AT-38	9:23,8/4	0.4	0.2	0.5	0.8	1.1	1.1	1.1	0.5	0.4	0.3	0.3	0.3	0.2
F-15	10:46,8/4	2.0	3.0	4.2	3.4	5.7	7.8	3.4	2.7	2.3	1.0	0.4	0.2	0.1
F-15	11:02,8/4	1.1	1.3	2.0	2.7	2.1	1.8	1.4	1.9	1.9	1.0	0.9	0.6	0.9
F-15	11:11,8/4	1.0	0.8	0.9	0.9	1.0	1.0	0.9	1.2	1.4	0.3	0.2		
F-15	11:34,8/4	0.1	0.9	1.1	2.1	1.9	1.4	1.0	1.1	1.2	1.1	0.7		0.6
F-16	9:06,8/5	0.9	0.6	1.1	1.3	1.0	1.0	1.4	1.8	1.5	1.3	1.3	1.0	1.0
SR-71	9:26,8/5	0.9	0.9	1.0	1.3	1.2	1.2	1.1	1.5	1.0	0.9	0.8	1.0	0.6
F-16	9:33,8/5	0.9	1.2	0.9	1.4	0.9	0.9	0.9	1.0	0.8	0.9	0.8	0.3	0.2
F-16	9:44,8/5	1.0	1.5	4.4	2.3	2.7	2.5	2.2	3.5	2.6	3.2	0.5	0.2	0.1
SR-71	10:55,8/5	0.8	0.8	0.7	0.9	0.8	0.8	0.9	0.9	0.8	0.7	0.9	0.8	0.6
SR-71	11:08,8/5	1.8	2.6	3.9	2.6	2.2	1.8	2.9	2.5	2.1	2.0	1.9	3.0	
F-16	11:44,8/5	0.4	1.2	4.8	1.9	5.4	5.1	3.2	4.3	2.7	1.1	0.2		
F-16	11:54,8/5	0.7	1.9	1.7	2.5	3.7	3.7		2.7	1.1		0.1		
F-16	12:04,8/5	2.0	1.1	1.8	1.4	1.8	2.3	1.3	1.5	1.3	1.0	1.0	0.3	
SR-71	12:35,8/5	2.2	1.0	1.2	1.4	1.3	1.2	1.4	1.5	1.1	0.7	1.2		
F-18	7:44,8/6	1.1	1.3	1.6	1.6	1.8	1.9	1.9	1.8	4.7	0.3	0.2		
F-18	7:57,8/6	0.9	0.9	1.0	1.0	1.4	1.4	1.2	1.2	1.2	1.4	0.5	0.2	
F-18	8:10,8/6	0.8	1.0	1.8	2.1	3.7	3.5	4.1	4.4	3.7	1.7		0.2	0.1
F-14	8:28,8/6					0.1		0.1	0.7	1.2	1.1	0.9	0.6	0.7
F-18	10:22,8/6	1.3	1.3	2.5	2.5	1.8	1.7	2.2	1.7	1.7	1.6	1.7	1.0	0.6
F-18	10:34,8/6	0.9	0.9	0.9	0.8	1.2	1.3	1.3	1.0	0.8	1.0	1.3	1.5	
F-14	10:43,8/6	2.4	3.6	6.0	4.9	3.8	3.9	6.8	2.8	1.4	1.2	0.2	0.1	
F-18	10:48,8/6	1.3	1.5	2.8	4.0	5.6	6.4	3.4	3.1	2.3	1.0	0.3		
F-111D	11:48,8/6	1.3	2.7	3.5	5.4	7.9	9.6	6.2	4.8		2.5	0.7	0.4	0.1
F-111D	12:04,8/6	1.2	0.9	1.9	2.0	1.4	1.7		1.3	1.6	1.6			
F-111D	10:50,8/7	1.5	1.9	2.5	2.5	2.2	2.1	2.9	2.7	2.1	1.6	2.1	1.3	0.9

Table 6. Peak Minus C-Weighted Sound Exposure Levels

		BEAR MILE MARKER													
AIRCRAFT	TIME,DATE	66	64	62	61	00	01	59	58	56	54	52	50	48	
F-4	8:41,7/31		24.9	24.7	24.9	24.4	24.0	24.5	24.6	25.5	25.5	26.5	27.2	22.4*	
F-4	7:48,8/3		24.8	24.9	25.5	25.9	25.5	26.3	25.7	25.3	26.1	26.7*			
F-4	7:58,8/3	26.0	25.9	25.0	25.1	24.8	25.1	24.7	25.3	25.9	28.2	27.4	25.9		
F-4	8:08,8/3	25.9*		26.5*	28.0*		29.4*		28.6*	24.2*	26.4*				
T-38	10:05,8/3					24.7*	21.4*	26.1*	27.9*						
T-38	10:12,8/3		30.0*	29.3*	30.9*				25.0*	25.6*					
F-4	10:29,8/3	29.1	29.5	26.5	25.6	29.6	26.3	26.0	25.5	27.1	27.1				
F-4	10:43,8/3	27.4			28.9	26.3	26.8	28.2	26.3	29.0	30.2*				
T-38	12:28,8/3							22.0*							
T-38	12:38,8/3	27.2*		25.2*	24.2*	27.7*		22.6*	26.8*						
AT-38	7:19,8/4	25.6	25.5	26.3	25.4	26.3	26.2	25.2	26.8	26.1	26.2	26.2	26.5	25.8	
AT-38	7:30,8/4	25.5	25.1	27.4	26.1	26.2	26.5	25.4	26.2	25.4	25.6	26.3			
AT-38	7:36,8/4	26.1	25.2	25.1	24.7	25.4	25.6	25.5	24.0	25.3	30.5*	26.3*	22.5*		
F-15	7:56,8/4	26.7	25.9	26.7	26.1	26.3	26.2	26.7	27.7	26.0		27.4	26.1	27.3	
F-15	8:04,8/4	26.1	25.9	25.8	27.5	26.1	27.0	25.6	25.5	25.4		25.6	26.3	26.1	
F-15	8:10,8/4	29.3	26.9	25.4	24.9	24.5	24.9	25.4	27.4	25.8	26.8	27.1		25.4*	
AT-38	9:14,8/4	25.3	26.6	24.5	25.6	25.0	24.8	24.8	25.6	25.3	25.3	25.5	27.2	27.1	
AT-38	9:23,8/4	27.9	26.9	25.7	25.1	27.3	27.3	26.4	26.0	27.1	26.8	26.9	27.5	27.9*	
F-15	10:46,8/4	26.0	26.5	26.4	24.3	26.2	27.9	25.7	25.7	27.1	28.8	30.6*	27.3*	22.9*	
F-15	11:02,8/4	27.5	25.9	26.1	27.6	26.0	25.5	26.0	26.8	27.0	28.3	26.6	29.9	27.9	
F-15	11:11,8/4	28.4	26.5	26.8	27.1	28.0	26.9	28.4	27.4	26.6	27.5	29.3			
F-15	11:34,8/4	25.4	27.3	26.6	27.3	26.6	25.9	26.1	26.7	28.0	27.6	28.4		28.8	
F-16	9:06,8/5	25.7	27.5	25.2	25.2	26.5	27.4	25.1	25.6	26.2	27.2	25.1	25.5	26.7	
SR-71	9:26,8/5	26.4	26.5	26.5	26.3	26.1	26.0	26.0	26.4	25.9	26.9	26.5	26.9	27.0	
F-16	9:33,8/5	26.3	26.8	26.0	26.4	26.1	25.5	26.5	25.9	26.8	27.3	28.1	28.8	28.0	
F-16	9:44,8/5	26.1	26.4	28.2	26.3	24.7	25.2	25.4	25.4	27.6	27.2	29.8*	25.0*	23.8*	
SR-71	10:55,8/5	26.6	27.3	28.1	26.7	28.7	27.2	27.0	26.7	26.9	26.4	27.7	26.9	26.8	
SR-71	11:08,8/5	26.3	26.2	24.9	25.6	27.4	26.2	27.0	27.2	26.0	25.8	26.9	26.3*		
F-16	11:44,8/5	26.1*	26.0	27.8	26.4	25.9	26.3	26.2	23.9	26.5	25.9	26.3			
F-16	11:54,8/5	27.4	24.7	25.4	25.1	24.5	25.1		25.6	28.6		28.8*			
F-16	12:04,8/5	28.5	26.2	26.0	25.2	24.9	25.6	26.4	26.2	25.7	26.7	26.2	25.6		
SR-71	12:35,8/5	27.9	25.8	26.1	25.4	25.5	26.1	27.9	26.2	28.4	28.6	27.2			
F-18	7:44,8/6	25.2	24.9	24.9	25.2	25.0	25.0	24.9	24.5	25.3	25.3	29.6			
F-18	7:57,8/6	26.1	25.5	25.4	25.6	25.4	25.3	26.3	25.9	25.3	26.2	28.4	24.0		
F-18	8:10,8/6	26.3	28.4	26.4	25.8	24.9	25.2	25.3	24.7	25.0	26.3		21.2*	26.5*	
F-14	8:28,8/6					27.4*		27.1	26.3	24.7	26.7	24.6	15.2	26.9	
F-18	10:22,8/6	27.0	27.1	26.1	25.0	24.2	24.2	25.9	25.1	25.4	27.6	28.7	27.2	26.9	
F-18	10:34,8/6	26.8	27.1	25.5	26.1	25.6	26.6	27.5	25.4	27.1	27.7	26.9	29.2		
F-14	10:43,8/6	25.3	27.1	25.1	25.6	24.8	25.1	26.2	26.9	26.4	29.2	26.6*	24.6*		
F-18	10:48,8/6		25.5	25.5	24.7	25.1	26.5	25.8	26.2	27.7	26.0	26.9*			
F-111D	11:48,8/6	27.0	25.3	26.7	26.0	25.6	25.1	25.7	24.5		28.1	26.0*	22.9*	17.1*	
F-111D	12:04,8/6	28.2	26.6	27.2	26.9	27.2	28.3		26.7	25.7	27.2				
F-111D	10:50,8/7	26.7	26.9	25.6	27.8	25.6	24.9	26.6	26.1	25.5	26.8	26.2	26.7	30.6	

Table 7. Peak Minus A-Weighted Sound Exposure Levels

		BEAR MILE MARKER													
AIRCRAFT	TIME DATE	66	64	62	61	00	01	59	58	56	54	52	50	48	
F-4	8:41,7/31		48.5	38.9	40.3	40.2	40.0	40.4	43.7	43.4	46.1	47.8	45.0	32.9*	
F-4	7:48,8/3		44.3	40.4	39.8	45.3	43.0	44.3	41.3	42.2	47.9	35.3*			
F-4	7:58,8/3	48.5	46.5	39.7	41.1	41.0	41.6	41.9	43.3	41.7	51.8	45.1	47.9		
F-4	8:08,8/3	41.3*		44.4*	44.2*		41.3*		49.4*	43.5*	45.7*				
T-38	10:05,8/3					32.7*	28.3*	31.4*	37.0*						
T-38	10:12,8/3		37.7*	42.6*	42.9*				46.7*	46.7*					
F-4	10:29,3/3	46.4	51.0	45.1	42.4	40.4	42.7	38.6	44.2	48.5	49.6				
F-4	10:43,8/3	35.6			47.5	45.2	45.3	48.8	49.2	50.1	45.1*				
T-38	12:28,8/3							28.7*							
T-38	12:38,8/3	34.5*		50.5*	45.9*	49.9*		44.9*	42.2*						
AT-38	7:19,8/4	47.6	44.2	50.2	46.7	49.4	48.9	46.1	50.6	46.7	44.7	44.8	43.9	46.8	
AT-38	7:30,8/4	43.2	48.1	48.5	47.5	48.7	47.8	47.5	46.5	46.6	42.6	48.1			
AT-38	7:36,8/4	46.5	48.3	49.5	45.2	49.7	46.8	46.6	44.7	41.5	35.4*	37.3*	39.1*		
F-15	7:56,8/4	45.2	41.6	42.8	44.5	44.2	44.3	44.8	50.8	41.4		47.6	43.9	40.3	
F-15	8:04,8/4	41.8	43.4	42.9	50.3	44.6	47.7	42.3	42.4	44.5		47.1	41.8	47.4	
F-15	8:10,8/4	49.8	48.8	41.4	41.5	40.5	42.0	43.3	46.2	43.1	49.8	33.9*		34.3*	
A7-38	9:14,8/4	45.6	47.8	40.0	50.3	45.5	44.7	42.0	45.6	46.7	49.4	46.5	45.1	42.4	
AT-38	9:23,8/4	48.0	44.0	47.9	46.5	49.7	49.5	48.2	47.4	45.3	47.9	45.6	48.4	39.3*	
F-15	10:46,8/4	46.0	46.0	39.0	41.5	39.7	38.3	40.1	46.4	46.7	50.7	45.9*	40.8*	33.7*	
F-15	11:02,8/4	50.1	43.6	47.5	45.5	44.6	43.6	45.5	47.6	44.2	50.5	44.9	49.2	51.6	
F-15	11:11,8/4	47.5	46.4	46.0	49.6	47.7	47.8	47.4	45.6	47.0	46.0	40.7			
F-15	11:34,8/4	30.7	50.3	48.1	40.5	44.7	48.6	46.1	44.9	50.9	50.7	50.9		50.2	
F-16	9:06,8/5	46.3	49.4	44.6	44.8	51.2	51.7	43.9	43.8	42.7	46.9	43.7	46.1	50.7	
SR-71	9:26,8/5	43.3	45.4	44.5	44.1	41.2	43.5	44.6	45.4	44.6	47.6	44.3	43.0	44.3	
F-16	9:33,8/5	45.5	46.3	43.9	47.0	47.0	42.6	48.2	45.0	48.4	46.6	49.7	44.4	43.0	
F-16	9:44,8/5	47.6	45.0	45.4	44.9	43.8	45.4	44.2	38.4	48.6	48.2	46.0*	39.7*	33.1*	
SR-71	10:55,8/5	44.3	46.8	49.1	45.7	46.0	44.7	45.6	47.3	47.3	47.9	45.0	46.0	46.8	
SR-71	11:08,8/5	50.0	47.0	39.5	43.7	42.0	41.6	45.2	47.9	44.3	42.7	45.2	41.3*		
F-16	11:44,8/5	47.1*	48.1	44.5	46.8	46.0	43.4	43.9	38.5	48.1	49.5	40.2			
F-16	11:54,8/5	51.2	48.5	43.8	40.8	44.1	37.3		46.7	50.9		36.2*			
F-16	12:04,8/5	48.9	45.9	46.9	42.8	41.9	43.6	45.9	44.7	43.6	47.2	49.4	47.6		
SR-71	12:35,8/5	42.8	46.4	49.2	46.8	42.2	43.8	50.4	45.4	51.1	51.4	46.4			
F-18	7:44,8/6	44.9	40.1	40.6	41.8	41.9	40.0	39.1	41.0	42.9	45.0	43.9			
F-18	7:57,8/6	45.3	46.0	42.5	44.1	42.9	42.8	47.8	47.8	42.9	41.5	48.1	39.0		
F-18	8:10,8/6	47.8	50.2	45.8	41.9	41.6	42.6	39.5	41.7	40.3	49.7		33.9*	37.2*	
F-14	8:28,8/6					37.8*		33.9	47.4	41.1	47.7	43.3	44.9	47.7	
F-18	10:22,8/6	44.9	45.8	44.1	41.5	39.0	38.9	47.6	43.4	38.3	46.5	49.8	50.3	47.8	
F-18	10:34,8/6	49.4	43.7	40.5	42.5	42.3	42.2	50.4	41.4	47.3	48.9	47.3	50.2		
F-14	10:43,8/6	41.7	47.5	39.9	46.1	41.5	42.1	43.7	42.3	48.0	50.4	40.3*	35.2*		
F-18	10:48,8/6		47.2	44.7	41.8	37.6	38.5	45.2	45.4	50.8	47.7	42.0*			
F-111D	11:48,8/6	51.6	43.8	44.9	39.7	38.9	39.3	43.0	40.0		48.2	47.3*	40.9*	27.4*	
F-111D	12:04,8/6	48.5	45.3	48.1	47.8	47.4	49.3		48.0	45.9	47.9				
F-111D	10:50,8/7	46.1	47.1	40.2	41.9	37.4	38.3	45.9	45.2	42.8	45.4	48.0	49.1	50.6	

### Comparison of Signatures

The BOOMFILE signatures are compared to identify how parameters such as atmospheric and operations variability, aircraft shape, altitude, lateral spread, and Mach number influence the sonic boom signatures. Large variability of the signatures obtained from sites 01 and 00, which were separated by only 100 ft, can be seen. Figure 9 displays two signatures obtained from an F-16 at 1.13 Ma at 14.1 K MSL. These signatures are reasonably consistent. In contrast, Figure 10, which contains signatures produced by an F-4 at 1.1 Ma at 14.4 K MSL, shows that the two signatures differ drastically in their peak overpressures. In Figure 10, one signature may be characterized as a peaked N-wave, and the other as a normal N-wave.

These comparisons show that at times sonic boom signatures may and can vary greatly even over very short propagation distances while at other times the signatures will remain constant. This variability has been shown earlier by Maglieri (ref 3) and emphasizes that atmospheric effects are a major complicating factor in predicting the exact shape of a sonic boom signature at a specific ground location.

Figure 11 displays two signatures, measured at site 00, produced by two separate runs of an F-18 at approximately 1.3 Ma at 30 K MSL. These signatures are almost exact with little variance between them. Figure 12 shows two signatures under the flight track (sites 00 and 64) of two F-15 flights at approximately 1.4 Ma at 45 K MSL where the peak overpressure of one signature is more than twice (1.9 to .8 PSF) that of the other one. One of these signatures has sharp peaks while the other has a rounded shape. Figure 13 depicts signatures at site 00 of two F-16 flights at approximately 1.13 Ma at 14 K MSL which are reasonably consistent with each other except for the leading and trailing shocks. Finally, Figure 14 shows signatures under the flight track (sites 00 and 59) produced by two F-18 flights at approximately 1.4M at 45 K MSL. These signatures seem to agree except for their initial rise time with one rise time being over twice as long as the other. These comparisons show that at times sonic boom signatures may and can vary greatly over similar operational conditions.



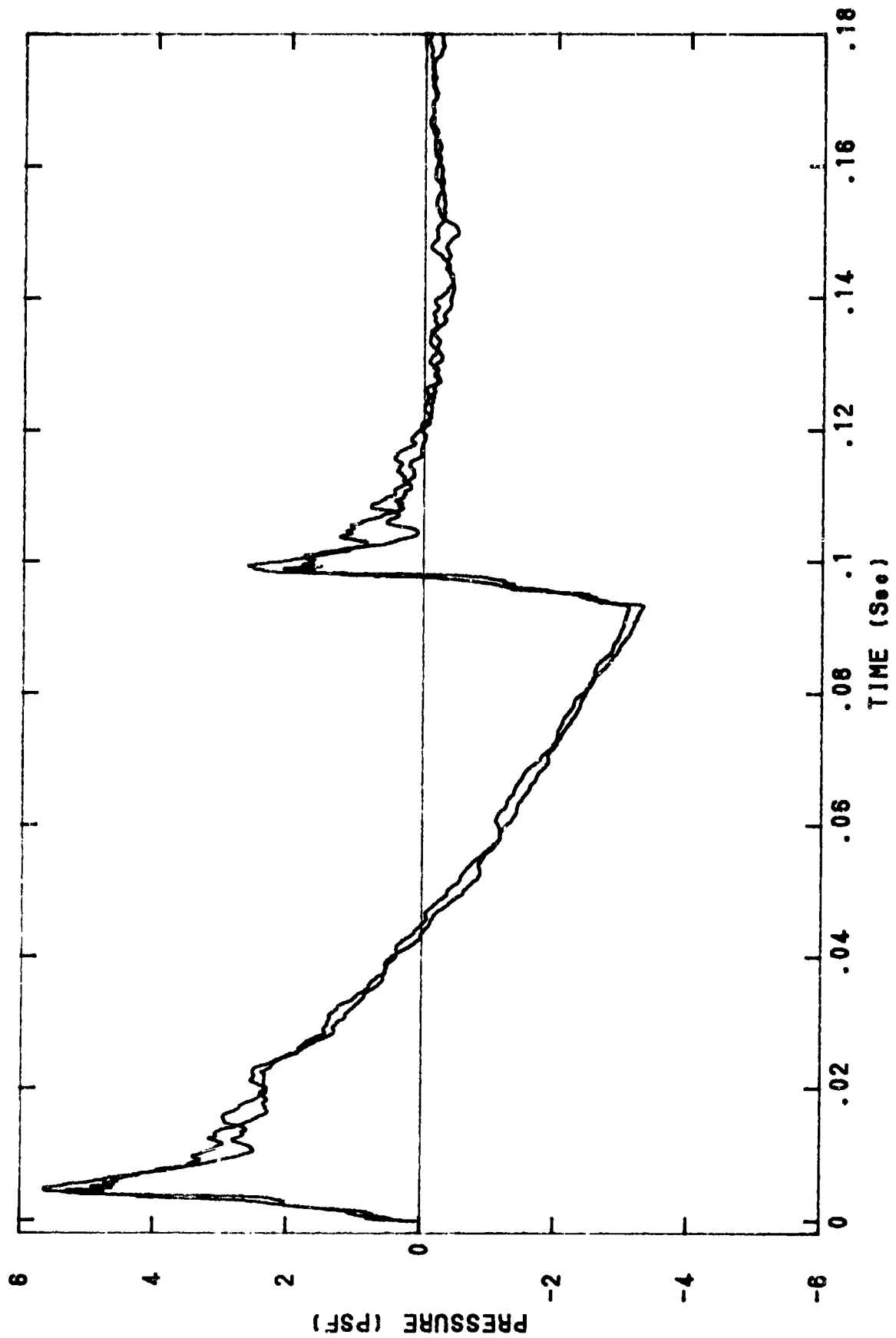


Figure 9. F-16 at 1.1Ma 14K M.L.L. Signature 100 Ft. Apart

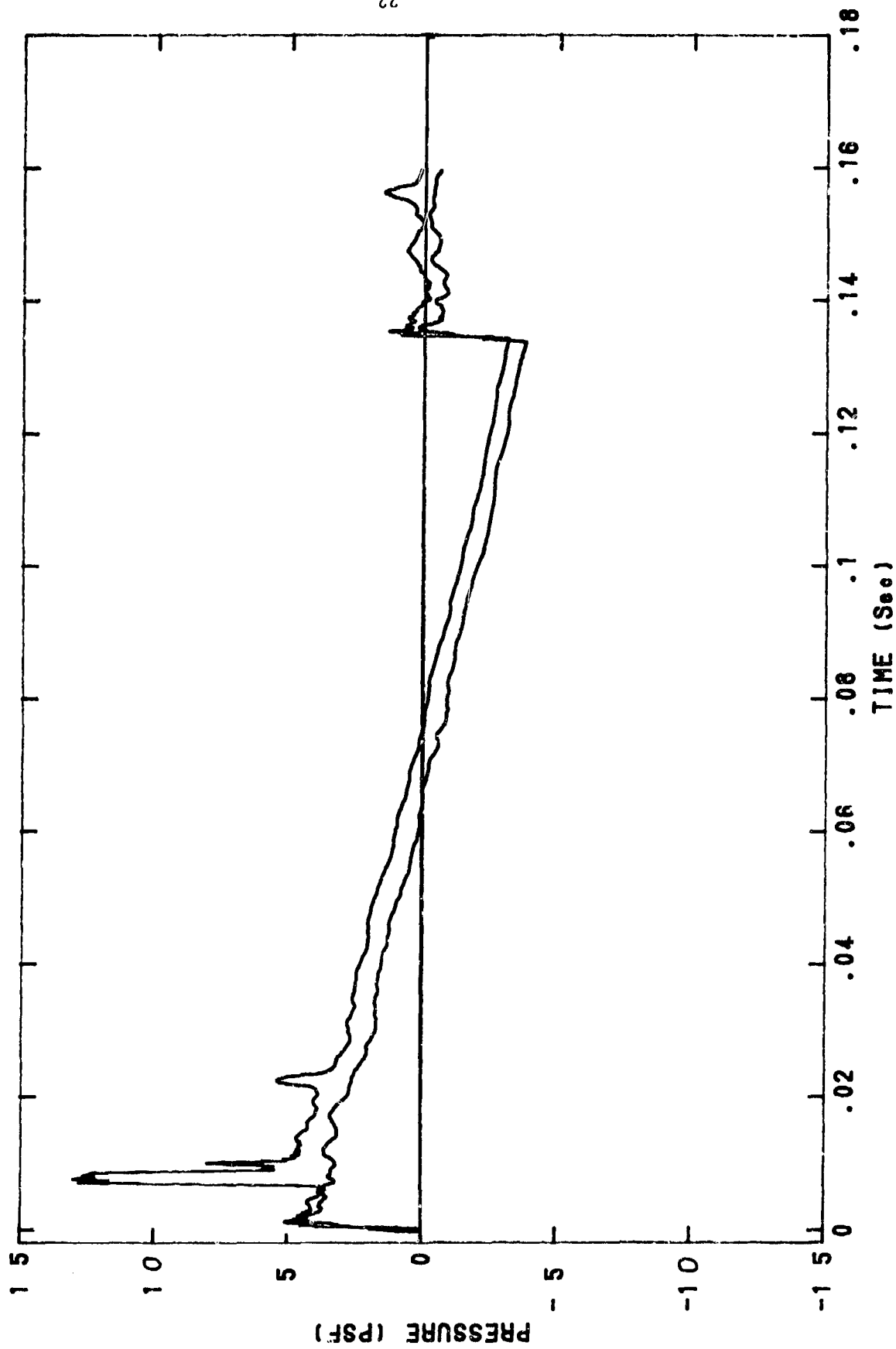


Figure 10. F-4 at 1.1Ma 14K MSL: Signatures 100 Ft. Apart

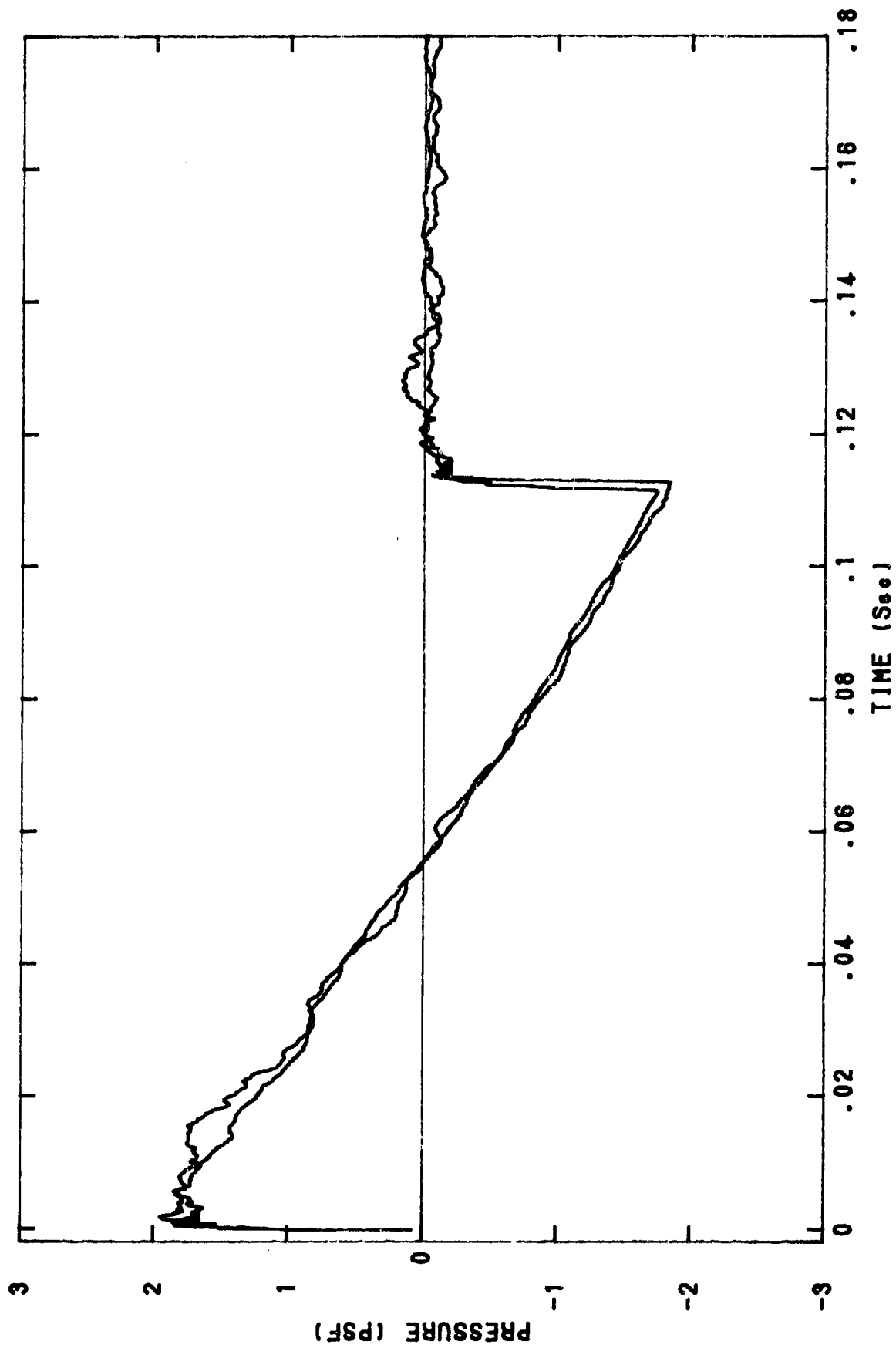


Figure 11. Two Flights of a F-18 at 1.3Ma 30K MSL

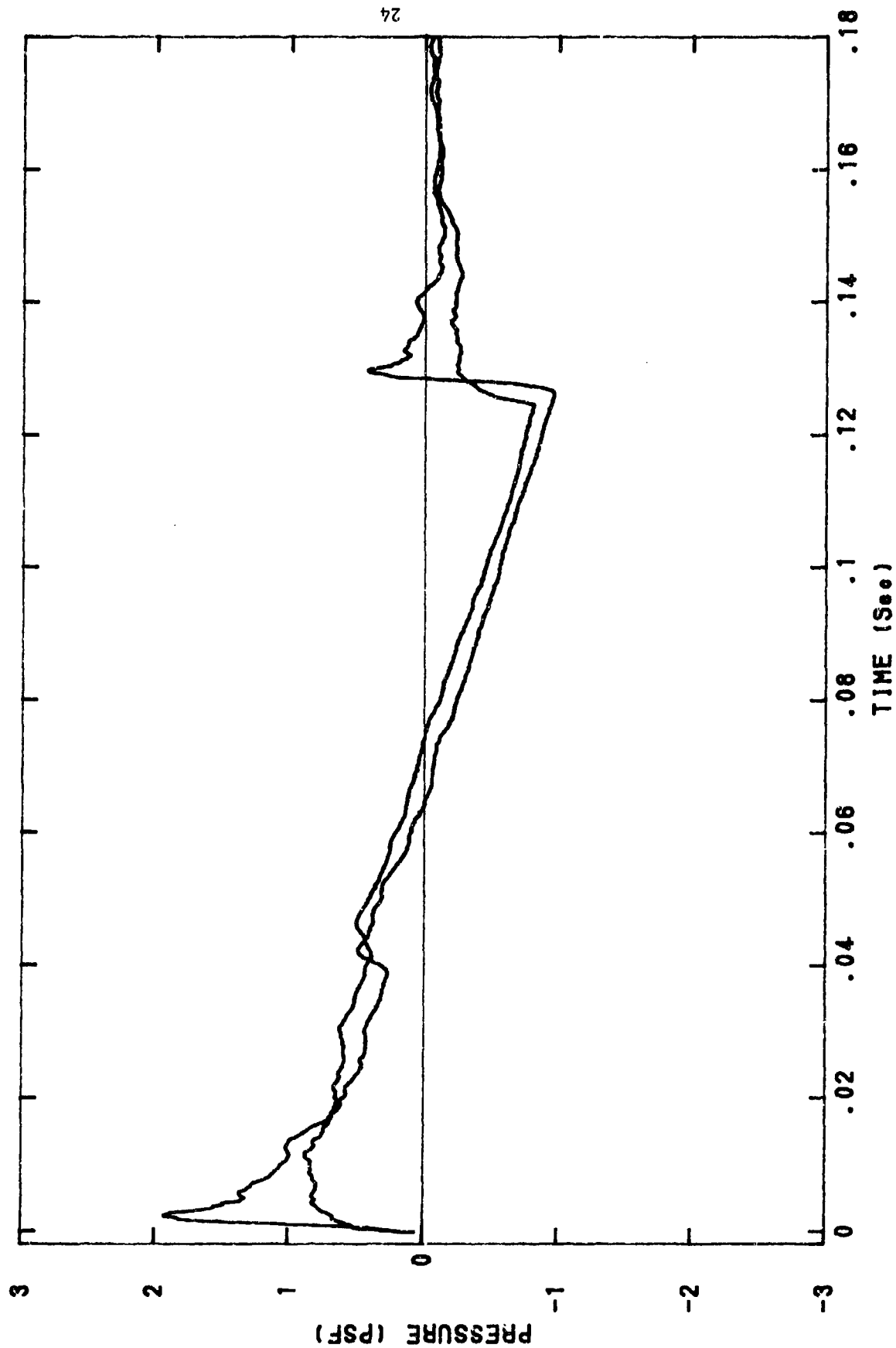


Figure 12. Two Flights of a F-15 at 1.4Ma 45K MSL.

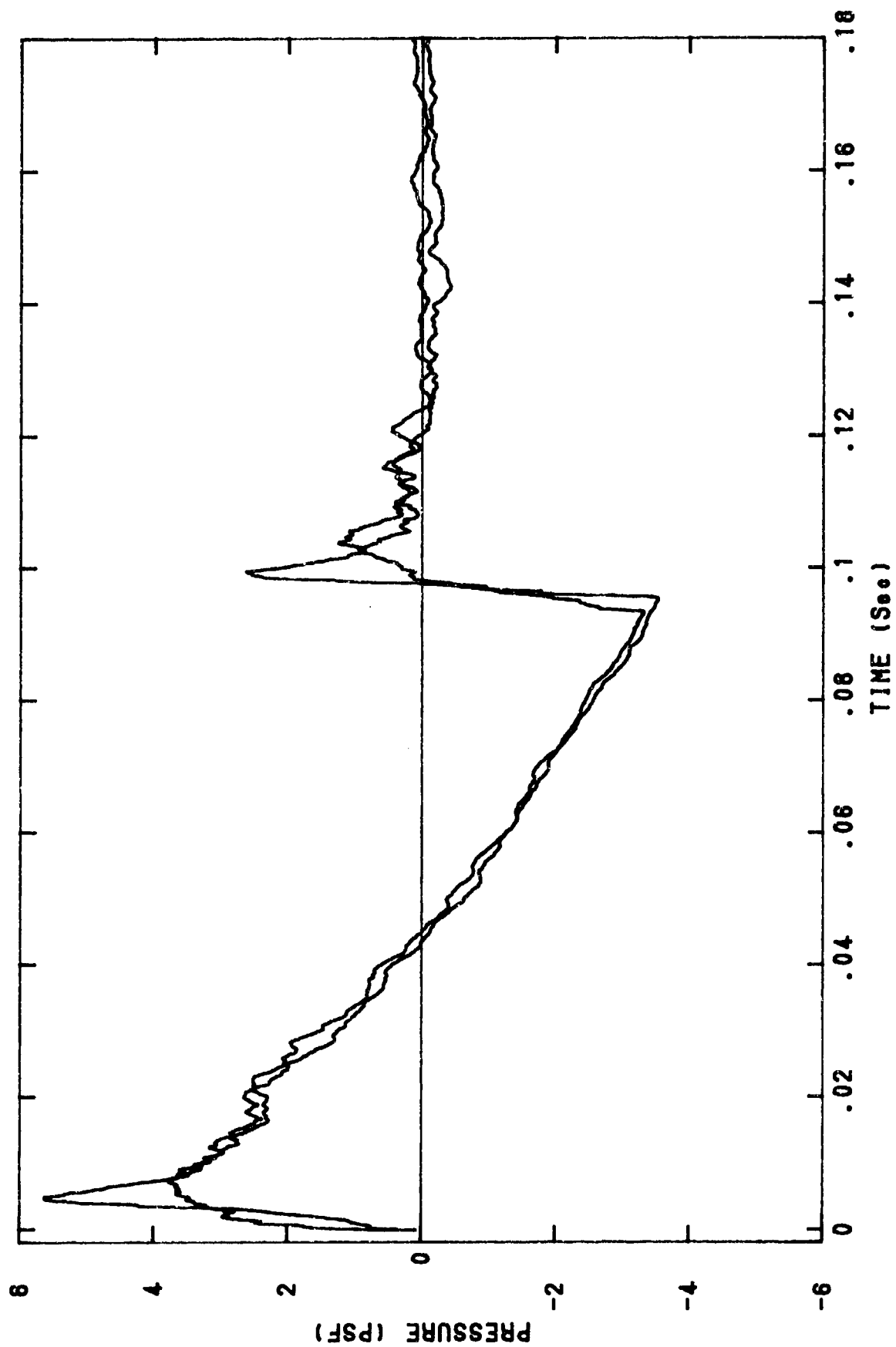


Figure 13. Two Flights of a F-16 at 1.1Ma 14K MSL

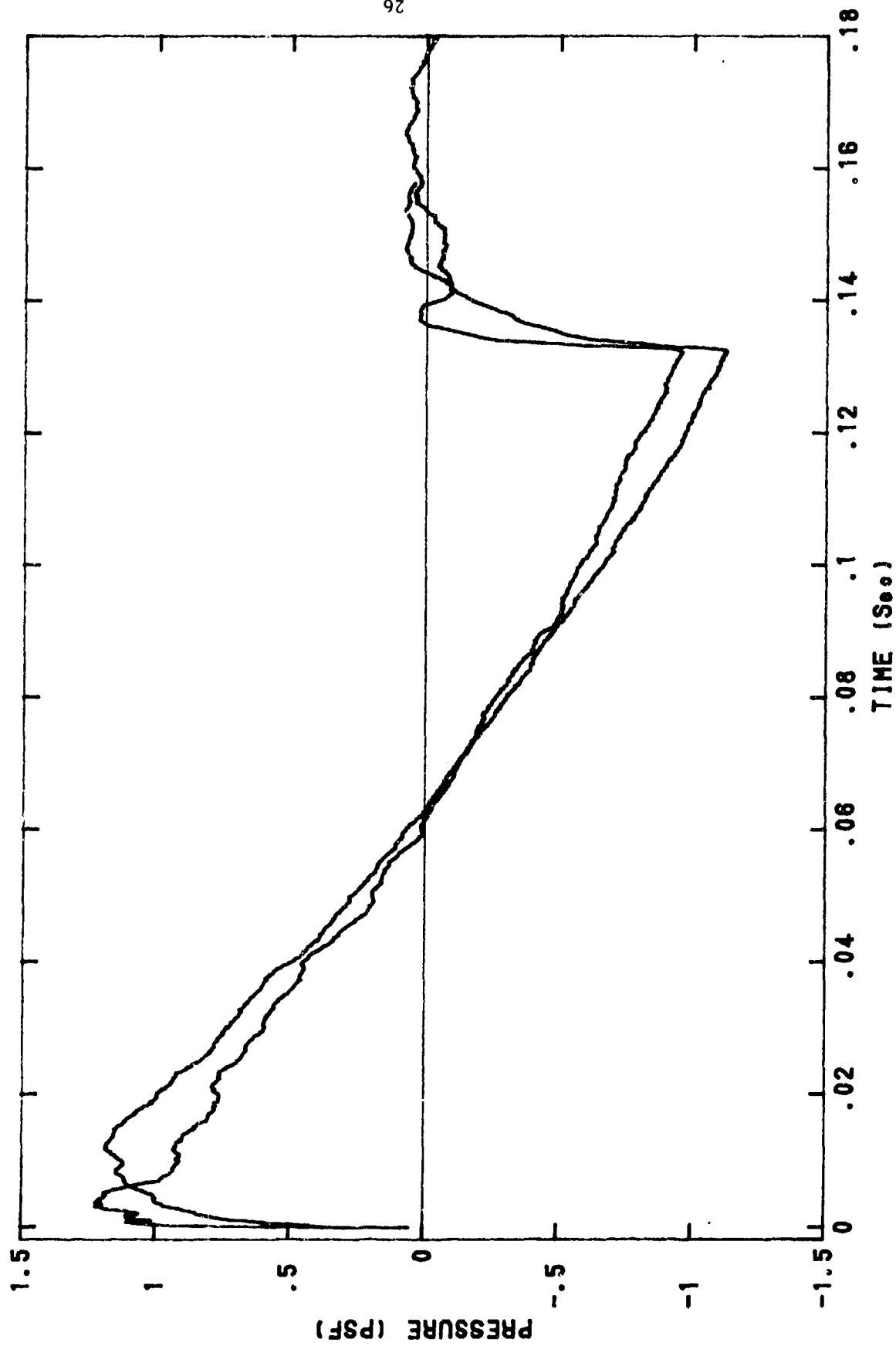


Figure 14. Two Flights of a F-18 at 1.4Ma 45K MSL

The effect of lateral spreading is displayed in the following graphs. Figure 15, signatures for an F-18 at 1.1 Ma at 13 K MSL clearly demonstrates this effect. As the sonic boom signal propagates laterally, the signature duration increases and its magnitude decreases. In this series of signatures, the initial rise time increases as the lateral distance increases. It should be noted that the rise time is generally defined as the time from the onset of the bow shock to the absolute maximum overpressure. Also, at larger lateral distances approaching lateral cutoff, the signatures lose its 'N-wave' character and exhibits more of a sine wave shape. It should be noted here that the estimated lateral cutoff as calculated by Carlson (ref 6) for this flight is at 3.9 miles. With this estimate, the 5.7 mile signature may be classified as a secondary rumble that has propagated well beyond the predicted lateral cutoff distance.

Figure 16 for an F-4 at 1.3 Ma at 29 K MSL has some features of special interest. First, the signal duration actually decreases with distance up to 4 miles and the initial rise time remains fairly constant throughout the signatures. Second, the signature shape retains its N-wave character, although at 8 miles it is slightly rounded. All of these signatures are well within the estimated lateral cutoff of 10.9 miles for this flight. Figure 17 for an F-15 at 1.4 Ma at 45 K MSL displays another series of signatures that again follow the normal trend of increasing duration and decreasing magnitude as the lateral distance increases. These signatures are well within the predicted 15.8 miles to lateral cutoff, although the signature at 12 miles has become rounded. In general the collected data verify this normal lateral spreading effect with the exception of minor variations as exhibited in Figure 16.

The aircraft shape and size influence the generation of sonic booms. This effect is demonstrated in Figures 18-20. In these graphs, the signatures from different aircraft flying at similar flight conditions are compared. Figure 18 for various aircraft nominally at 1.3 Ma at 28 K MSL shows that all the signatures have the basic N-wave shape, but the larger and longer aircraft create booms of longer duration. A trend describing the effect of aircraft shape on the magnitude of the boom is not as clear. Except for the F-4 signature, the trend is for larger aircraft to produce larger overpressures. The next two graphs shown in Figure 19 and 20 for various aircraft at other Mach number and altitudes do not display these stated trends exactly, but they do demonstrate that normally a larger aircraft generates a larger and longer sonic boom under similar aircraft flight conditions.

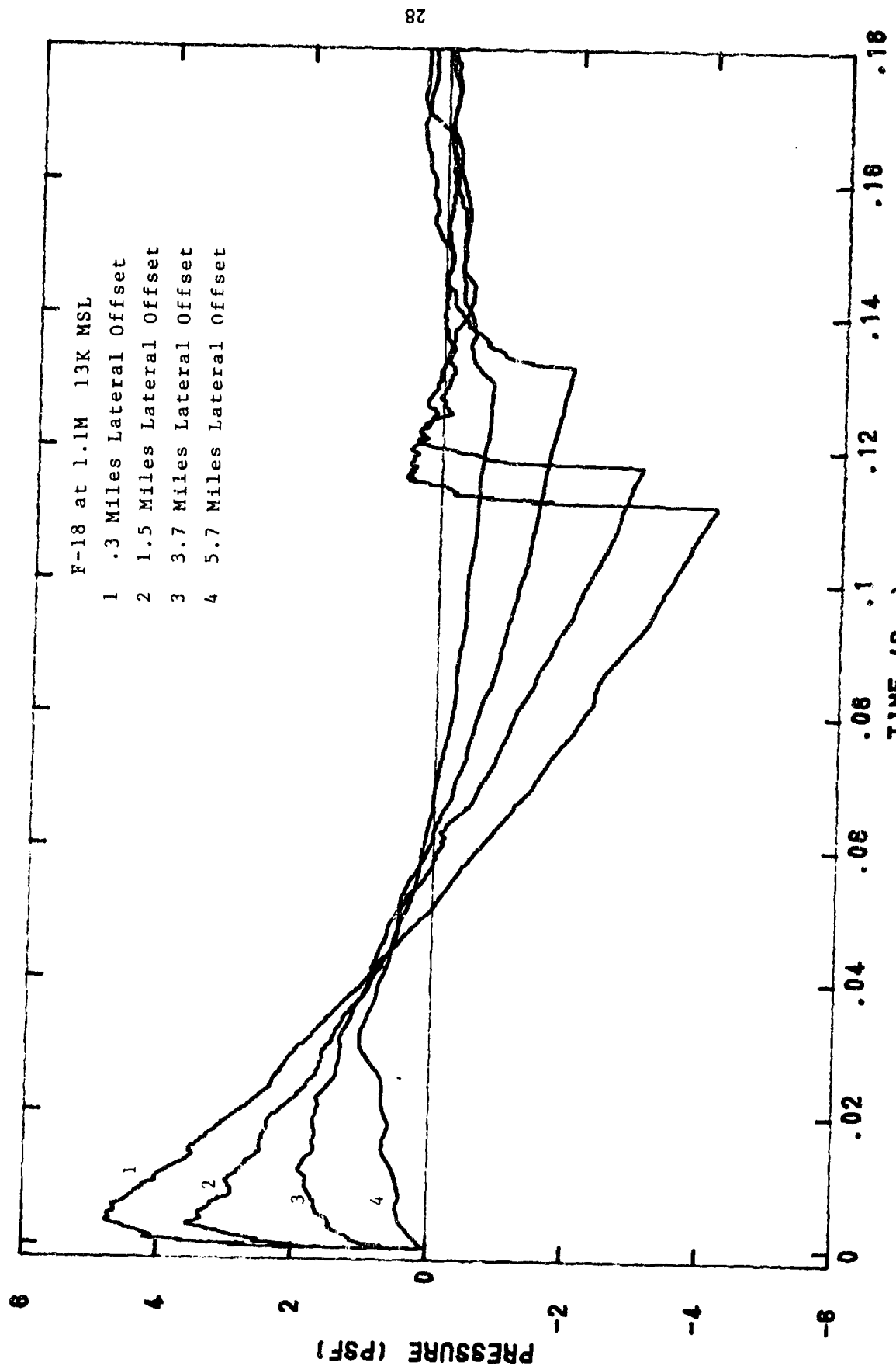


Figure 15. Lateral Spreading Effect from a F-18 Flight



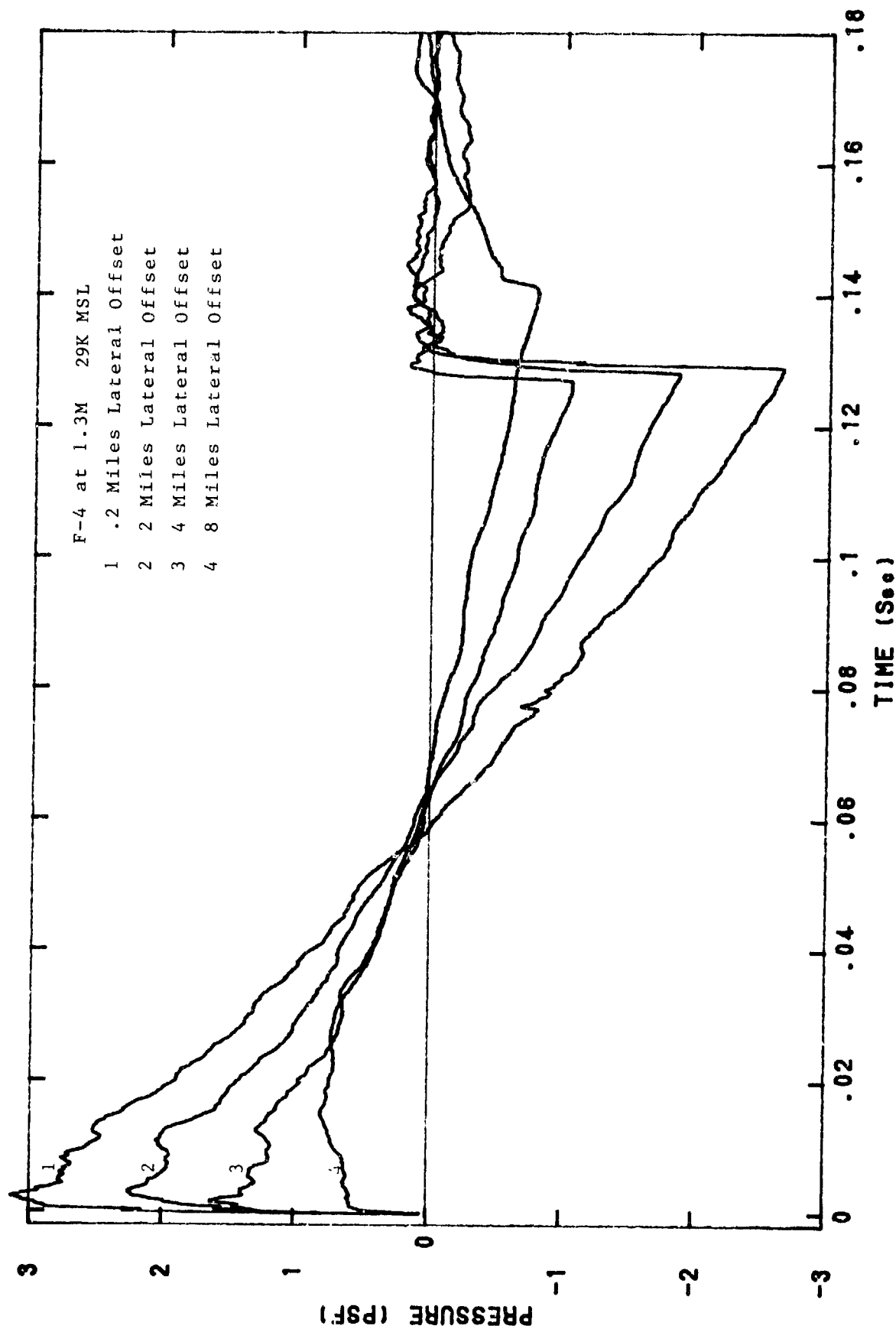


Figure 16. Lateral Spreading Effect from a F-4 Flight

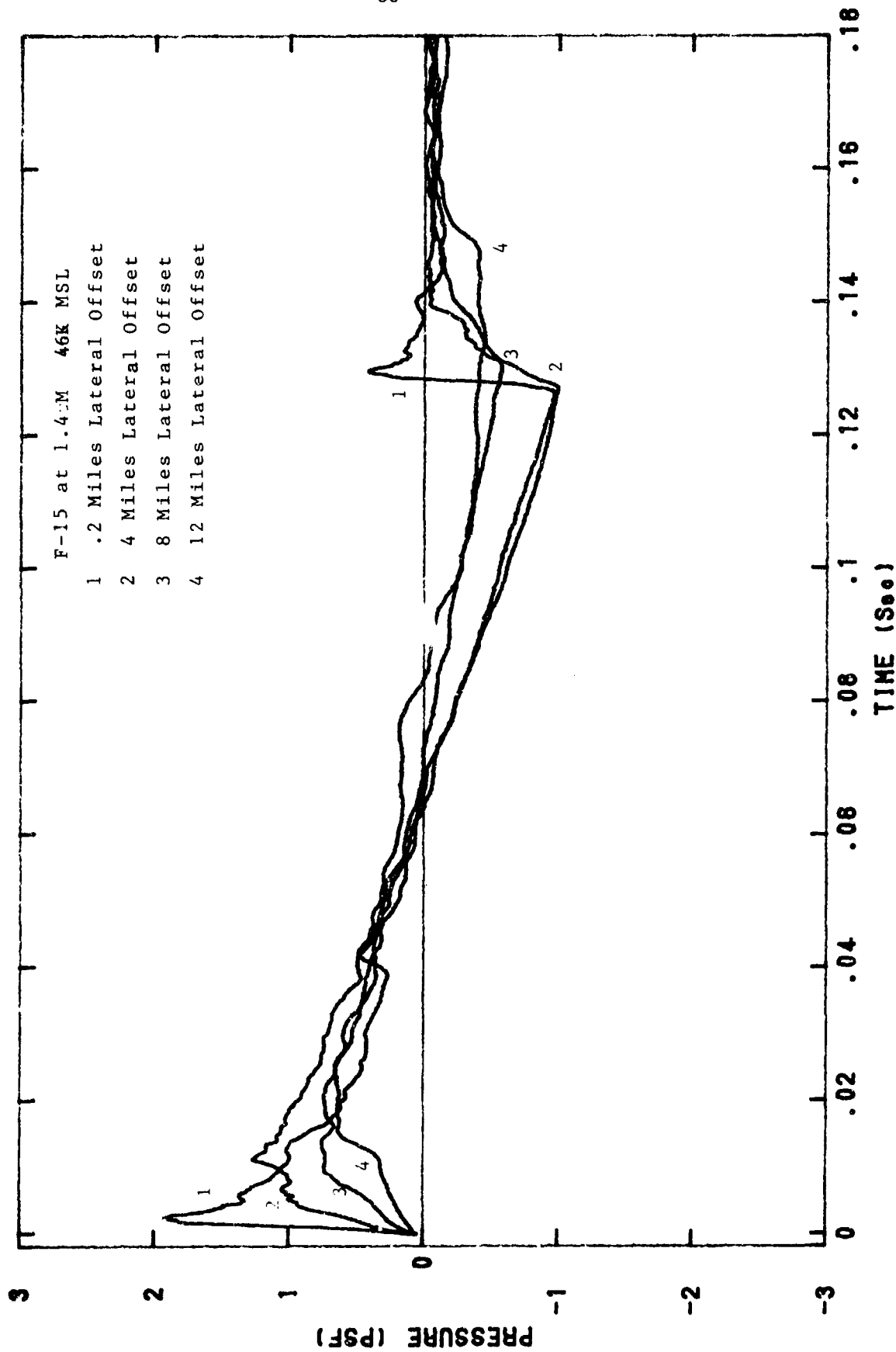


Figure 17. Lateral Spreading Effect from a F-15 Flight

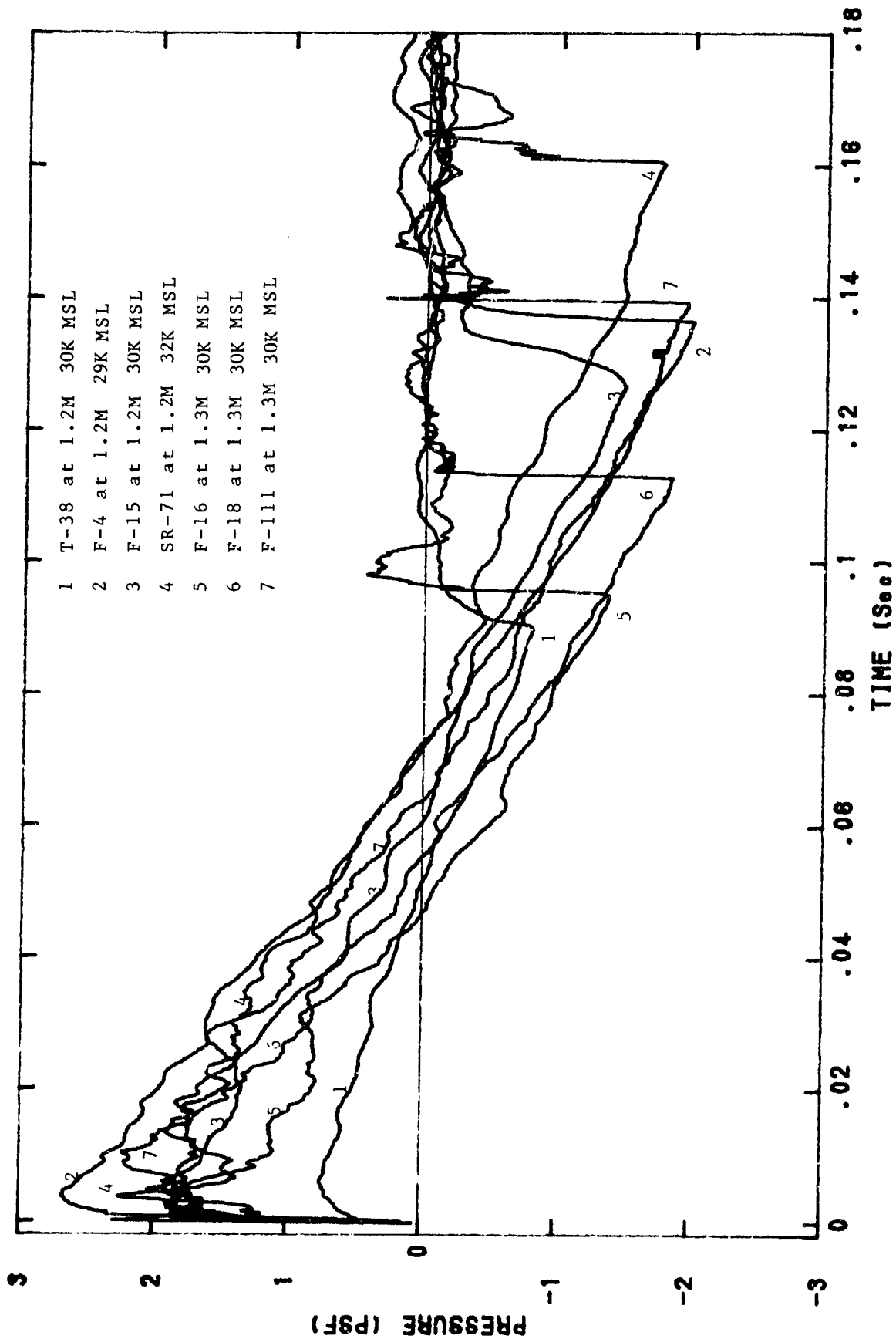


Figure 18. Aircraft Shape Effect at Medium Altitude Flights.

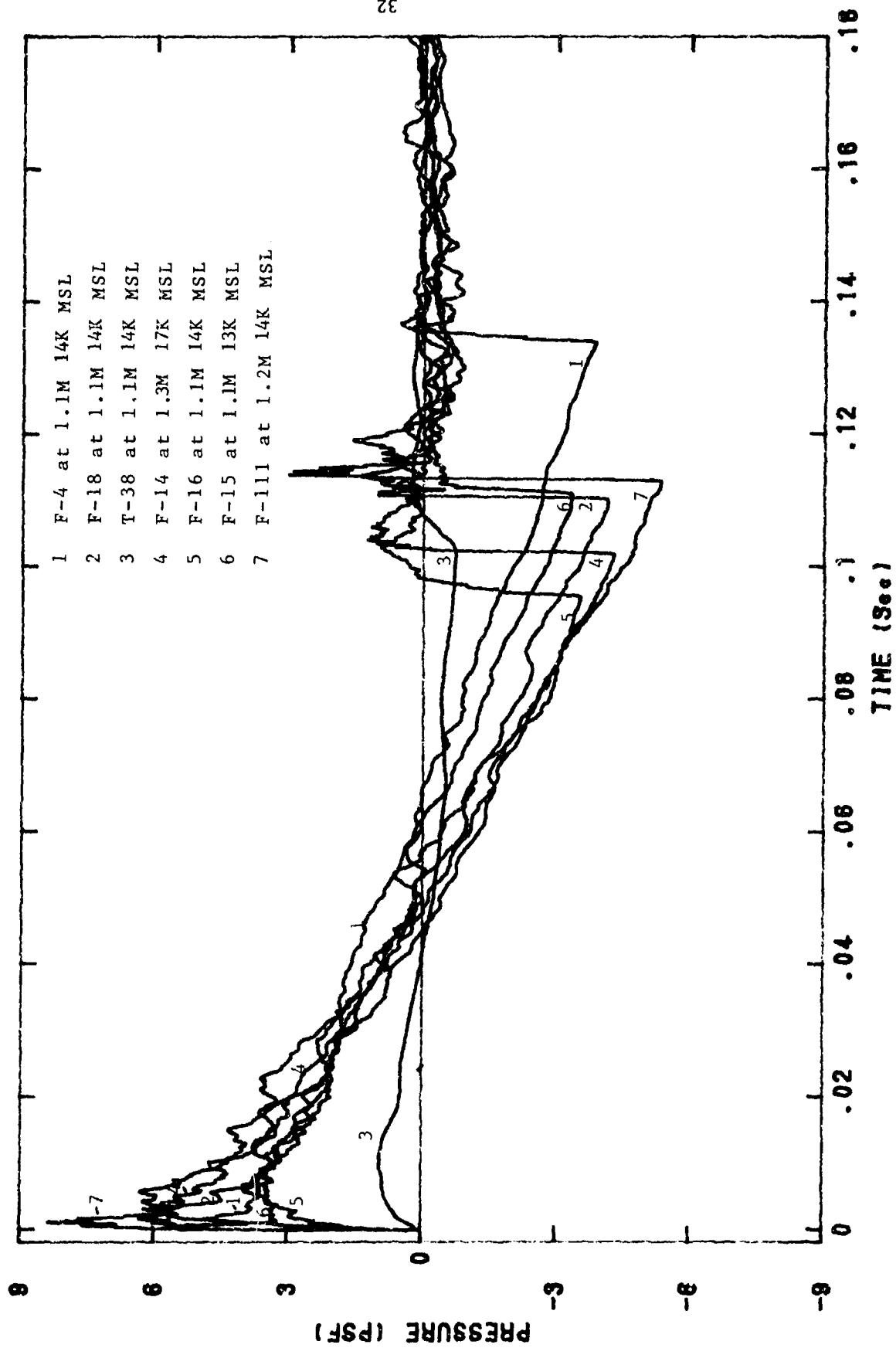


Figure 19. Aircraft Shape Effect at Lower Altitude Flights

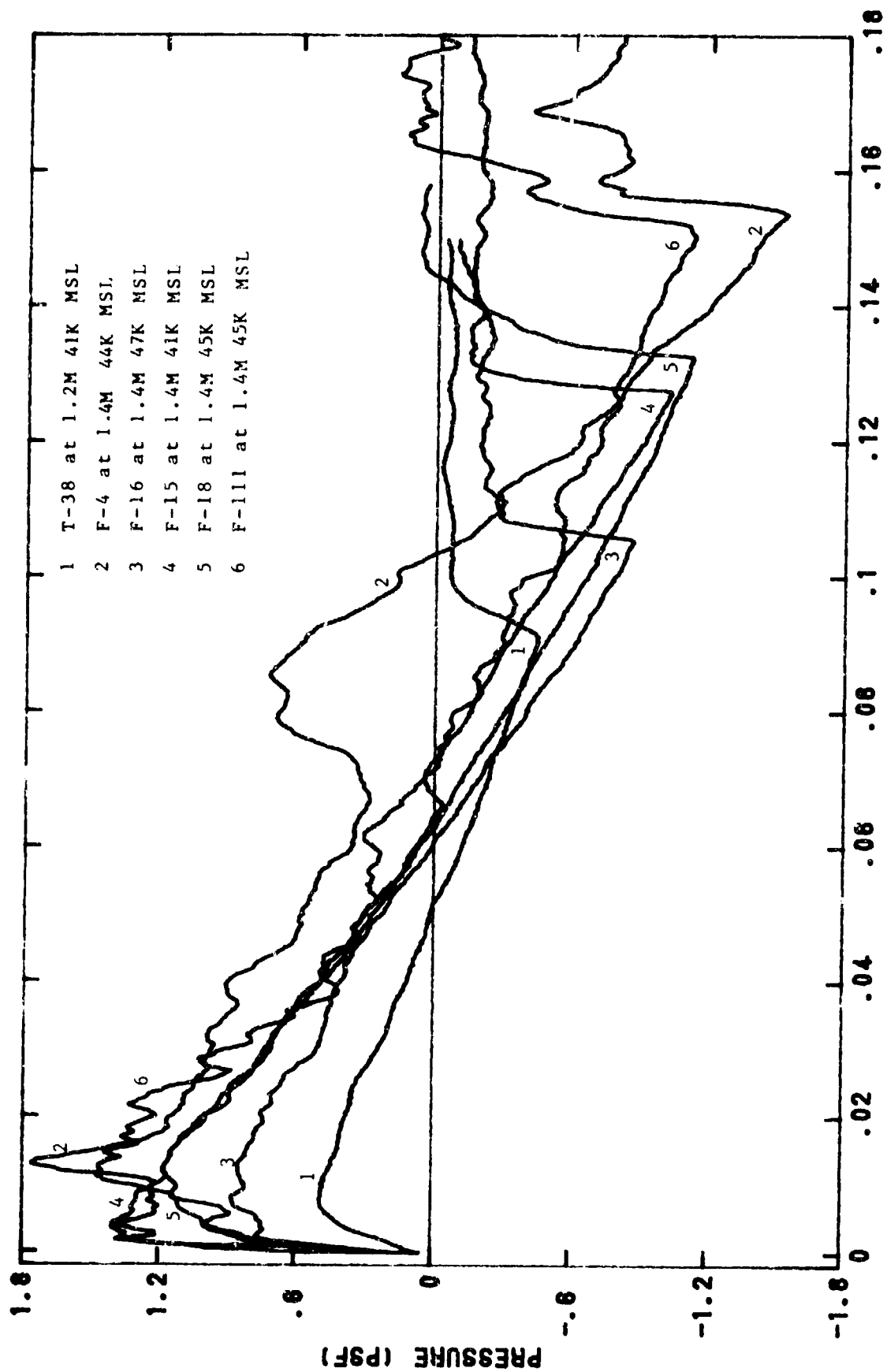


Figure 20. Aircraft Shape Effect at Higher Altitude Flights

In theory, an increase in Mach number will increase the overpressure, and an increase in altitude will tend to decrease the magnitude of the overpressure. These two factors compete against each other as the aircraft travels faster and higher. Figure 21 for an F-111 shows that altitude has the greater influence on the peak overpressures in typical aircraft flight operations. As the altitude increases the peak overpressure is reduced even though the Mach number also increases. Also, it should be noted that in this figure the duration of the boom increases as both altitude and Mach number increase. This trend is also exhibited in Figure 22 which displays the booms created by a SR-71. These plots show that the duration increases with both a rise in Mach number and altitude. The overpressures for the SR-71 at 1.7 Ma at 50 K MSL and at 2.6 Ma at 66 K MSL are very similar in magnitude, but the other signatures in Figure 22 follow the above stated trend of altitude dominating the magnitude of the overpressure for typical flight operations. The graphs contained in Figures 23-26 further demonstrate this general trend for other aircraft under various flight conditions. Figure 27 for an F-16 at various altitudes more clearly shows the influence of altitude and Mach number since the Mach number remains constant for three of the four signatures in this series. The magnitudes of the overpressures decrease with increasing altitude, but it is interesting to note that the durations remain unchanged for the three signatures with the constant Mach number. This figure indicates that Mach number influences the duration of the boom signature more than altitude, since the only change in duration occurred with a change in Mach number. In general, these data show that an increase in Mach number will increase the duration while an increase in altitude will decrease the magnitude.

In summary, the typical influence of flight parameters on sonic booms demonstrated in the data collected by Det 1 AL/BBE at Edwards AFB are as follows:

1. Atmospheric and operational variations strongly influence prediction of the actual sonic boom signature at a given location produced by a single aircraft.
2. Large aircraft tend to create higher amplitude and longer duration sonic booms than smaller aircraft at the same operating conditions.
3. Altitude has a greater influence than Mach number on the magnitude of the boom such that as altitude increases the magnitude decreases.
4. Mach number has a greater influence than altitude on the signal duration such that as Mach number increases the duration increases.

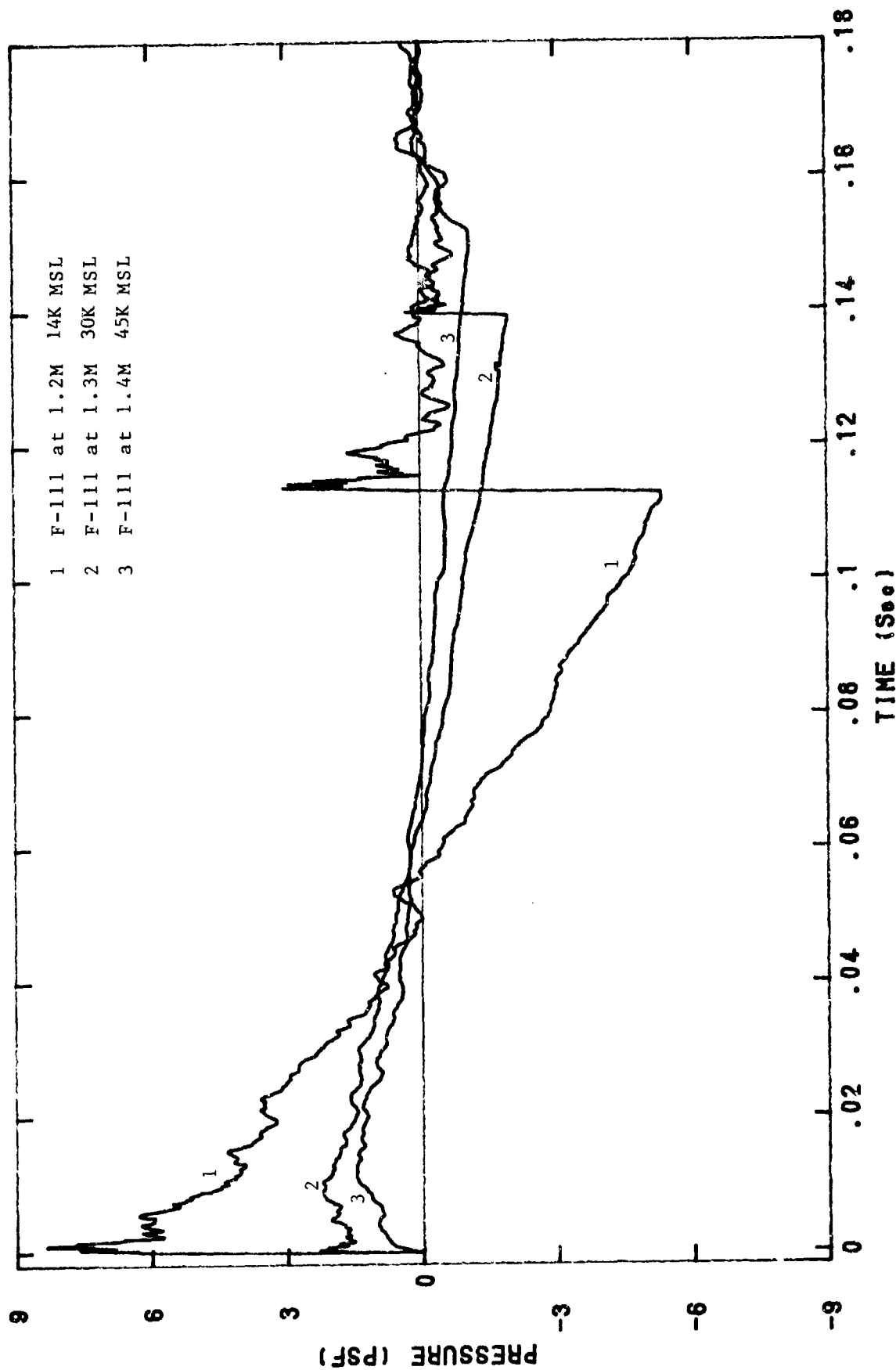


Figure 21. Altitude/Mach Number Effect from F-111 Flights

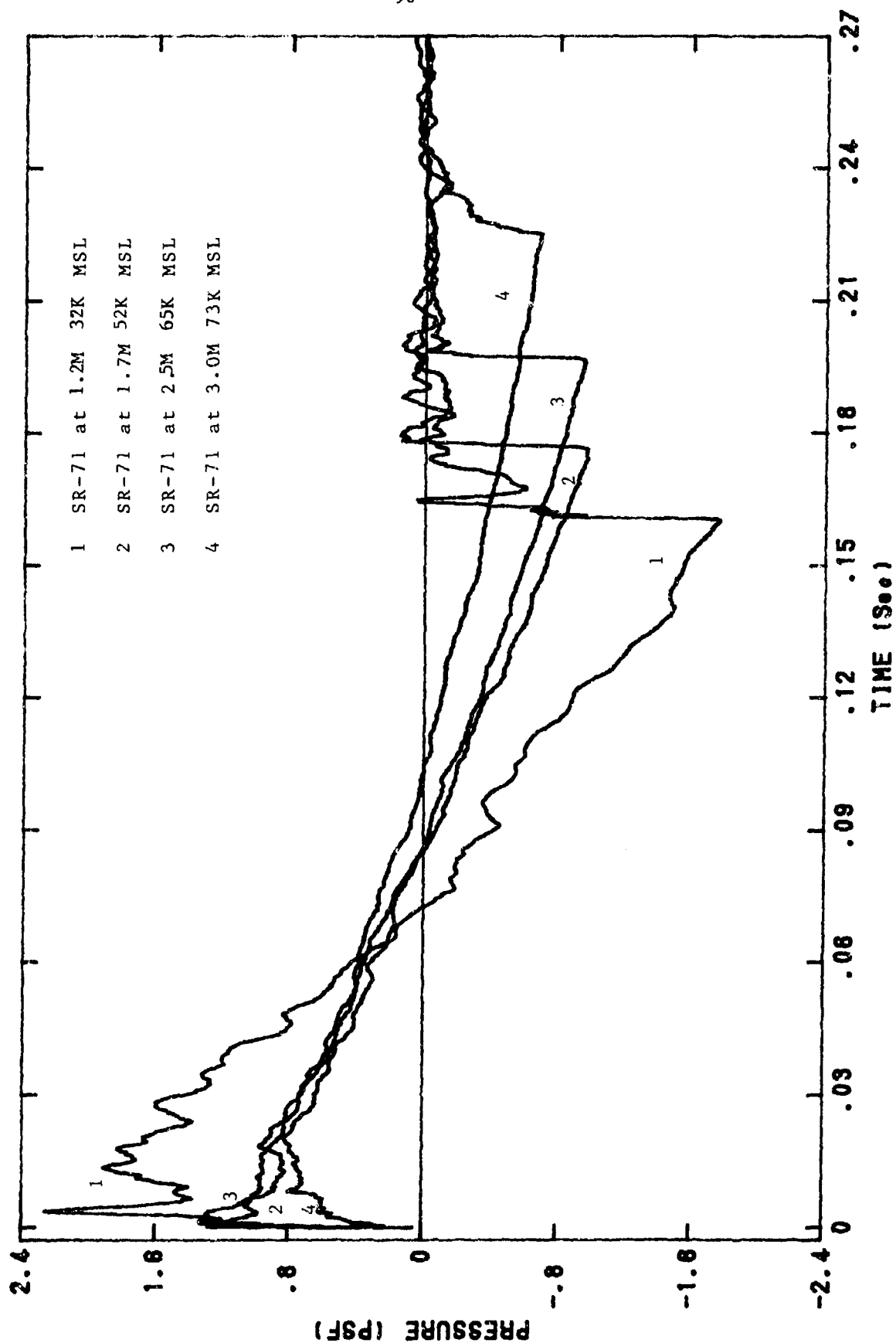


Figure 22. Altitude/Mach Number Effect from SR-71 Flights



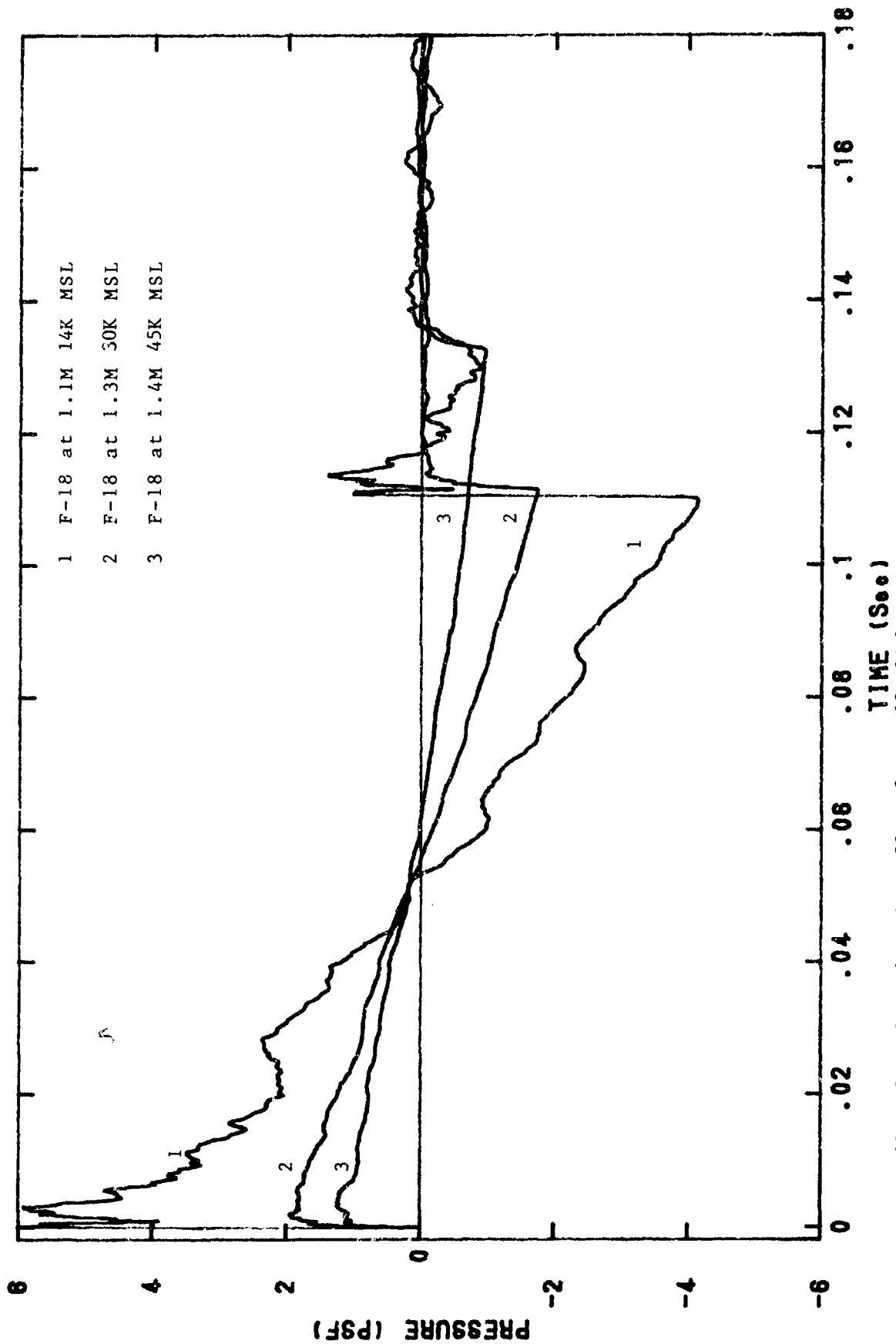
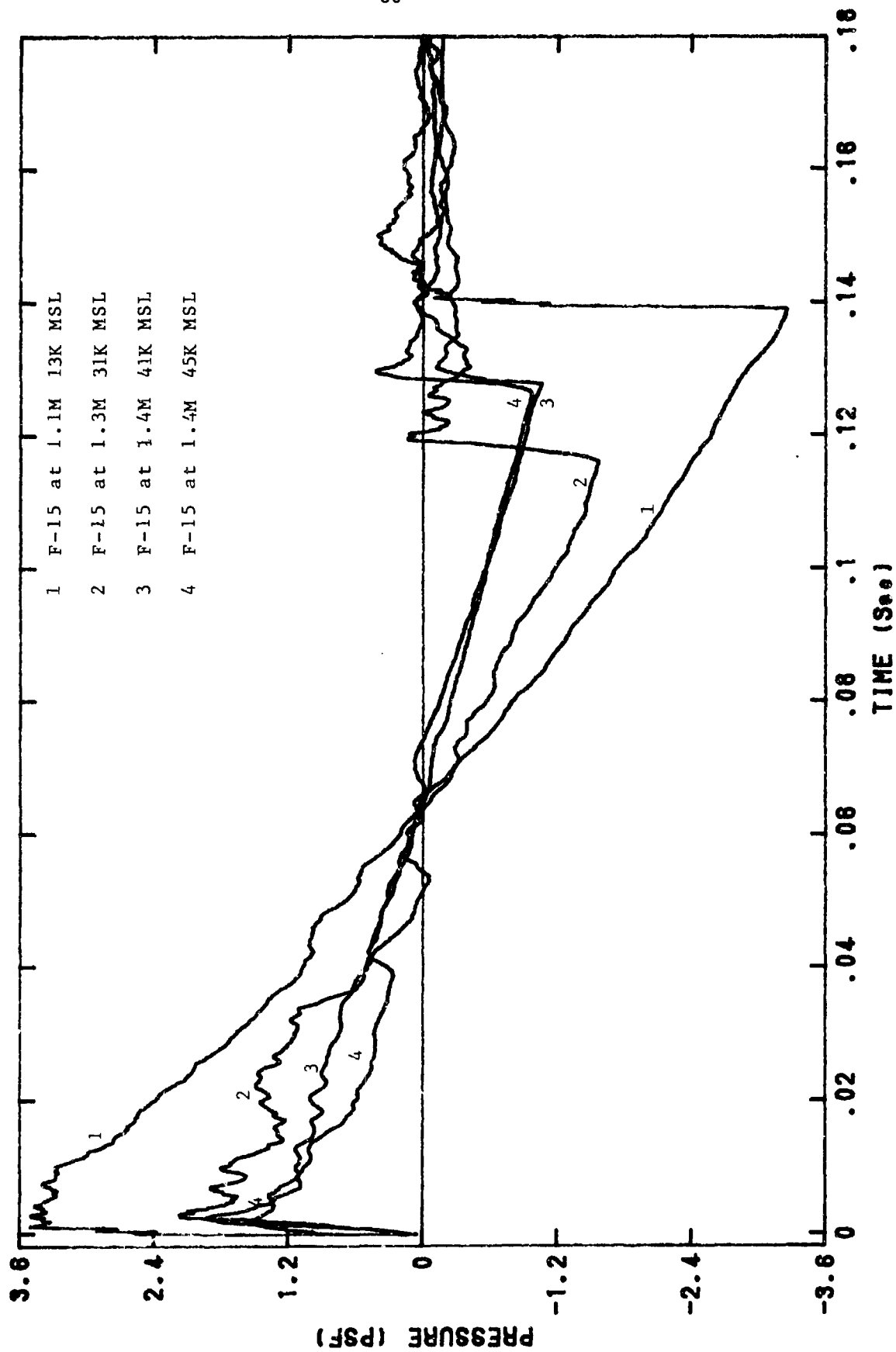


Figure 23. Altitude/Mach Number Effect from F-18 Flights



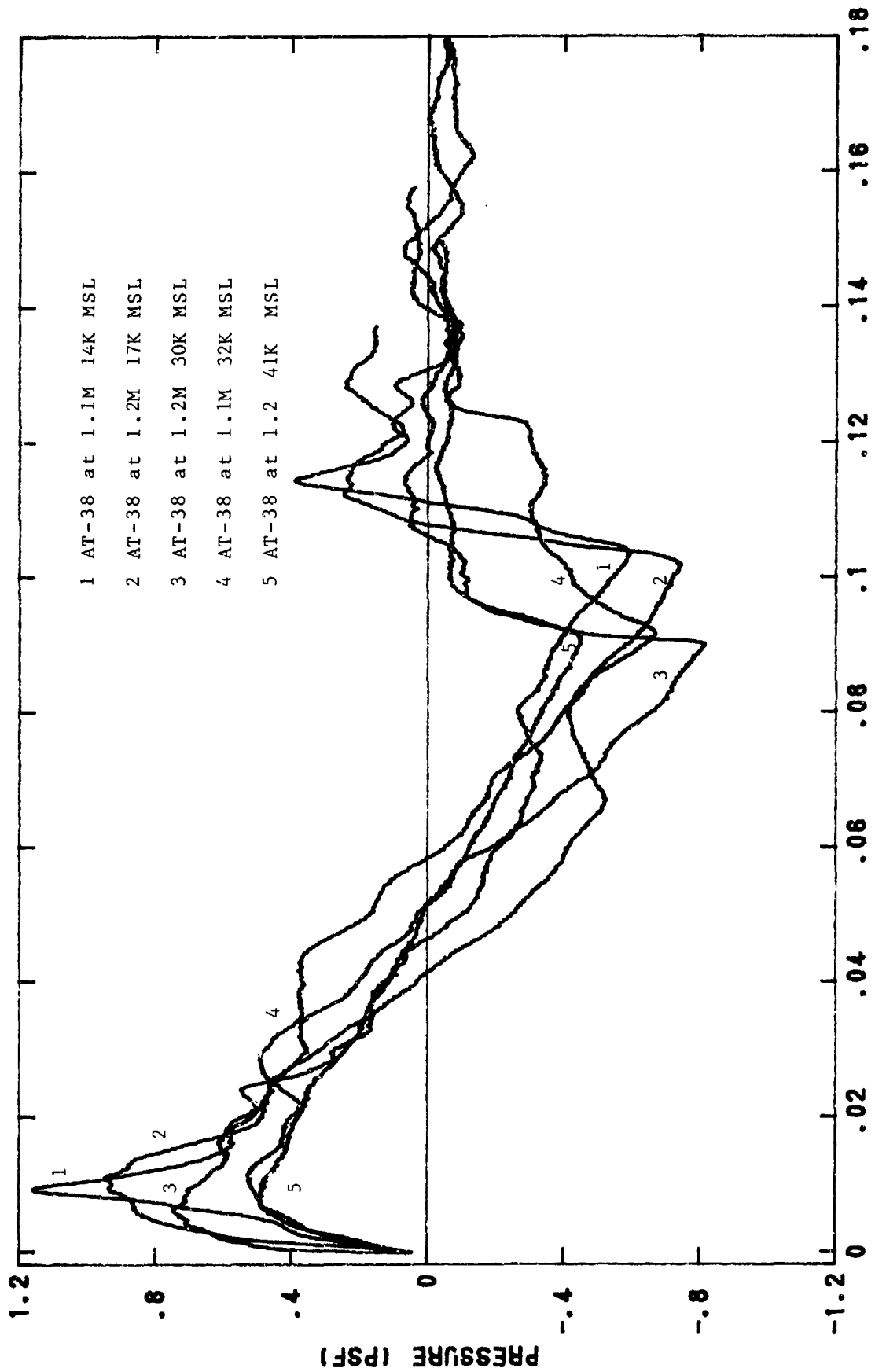


Figure 25. Altitude/Mach Number Effect from AT-38 Flights

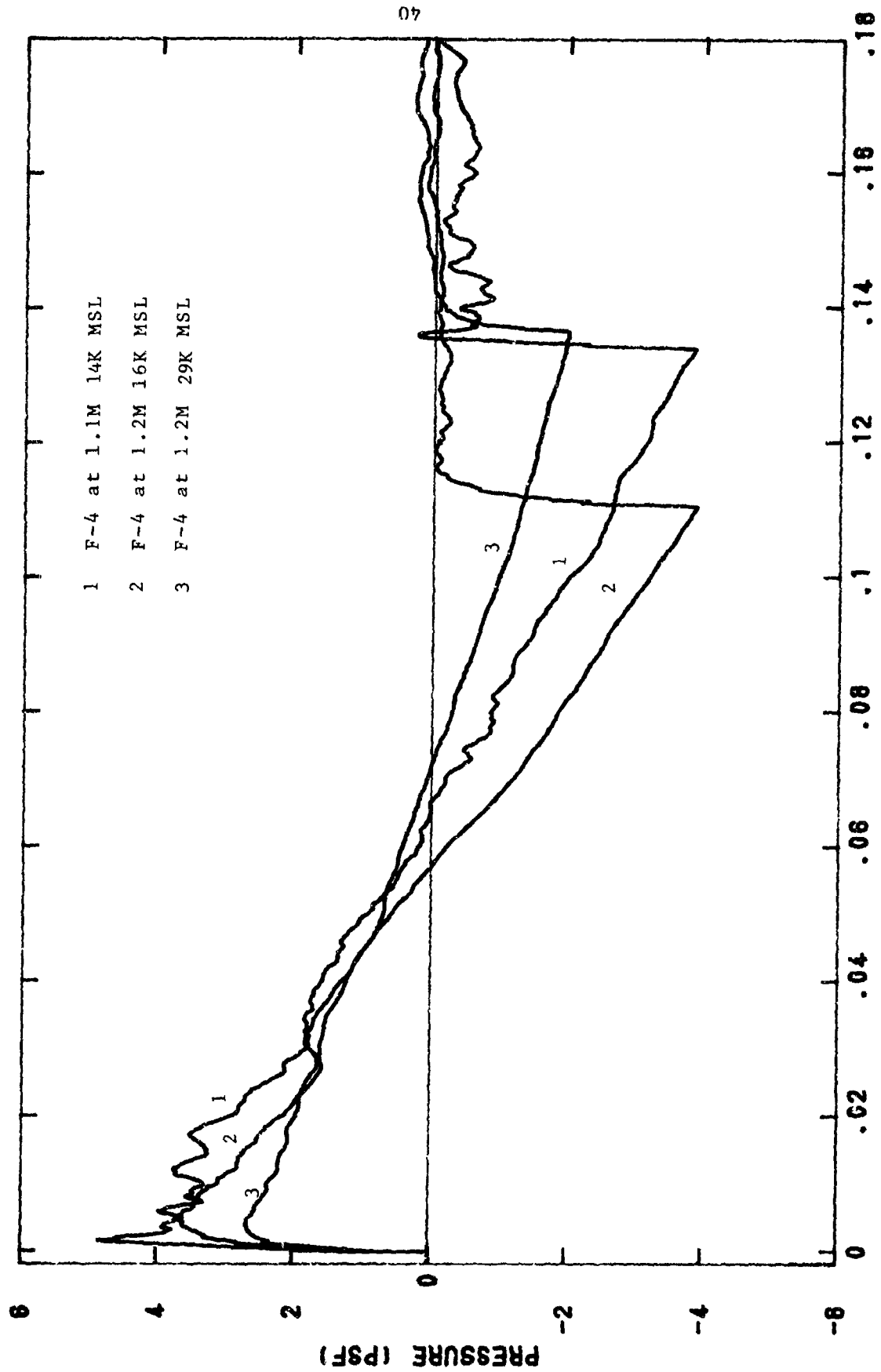
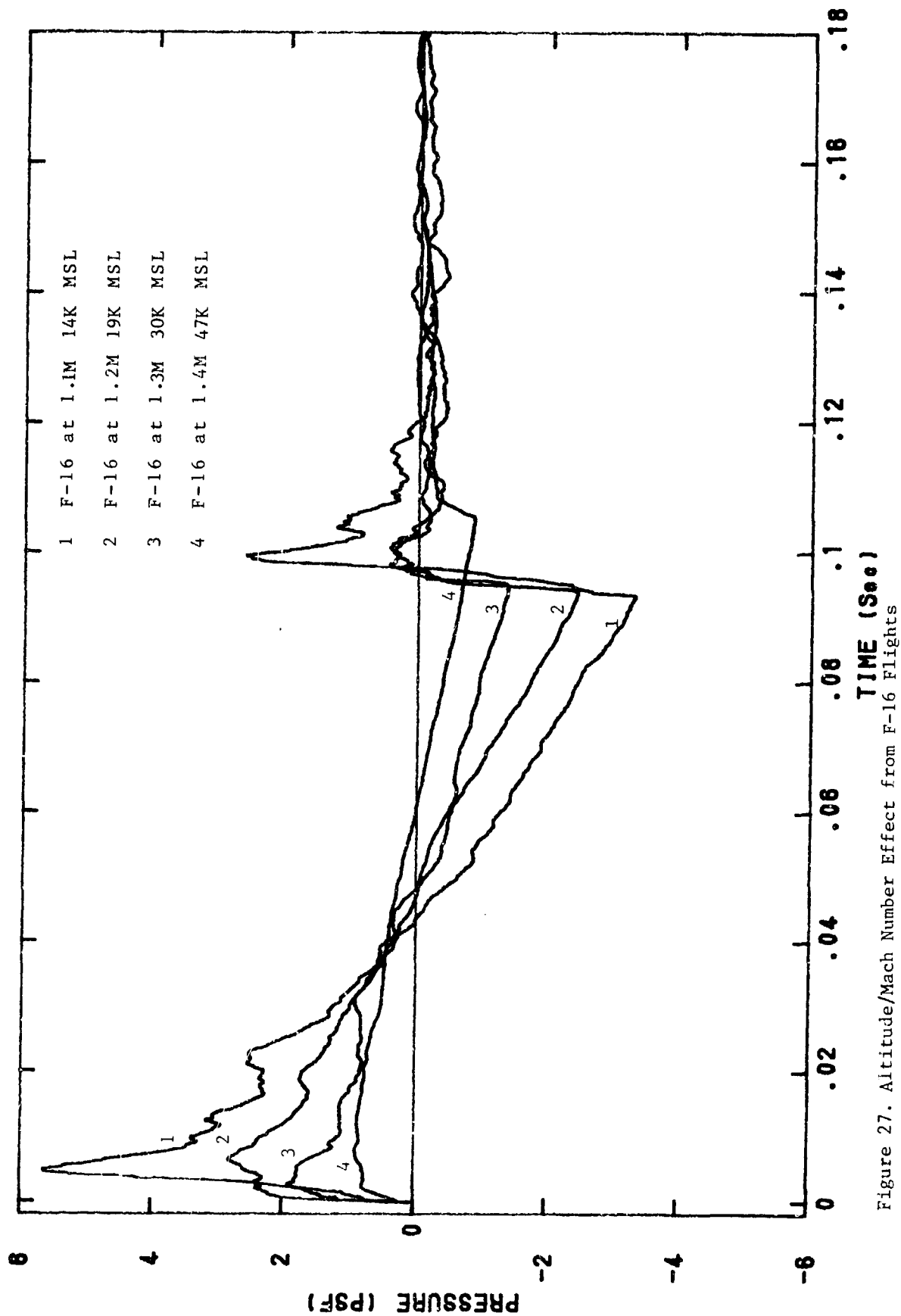


Figure 26. Altitude/Mach Number Effect from F-4 Flights



## CONCLUSIONS

The compilation of accurately measured sonic boom data is vital to the comprehension and prediction of the impact of supersonic training flights by military aircraft on the environment. This report provides the data contained in the BOOMFILE database and compares the data to highlight many features of sonic boom generation and propagation. BOOMFILE fulfills two basic needs concerning the environmental impact of sonic booms. First, it provides a reference measured database on the size of sonic booms produced by USAF and USN aircraft for a variety of Mach number and altitude conditions typically flown today. This database gives planners real data on which they can base their EIS's for new proposed operations. Second, BOOMFILE provides excellent experimental data that can be used to validate various sonic boom prediction models, since it includes aircraft tracking, weather profiles, and actual sonic boom signatures at various lateral distances for a wide variety of aircraft and flight conditions.

Several important observations seen from this study are the following:

1. Unsteady variations in the atmosphere may cause large variations in the sonic boom signature at a given ground location.
2. The CSEL metric better correlates to peak overpressure than an ASEL metric and can be estimated for carpet booms by subtracting 26 from the peak overpressure expressed in dB.
3. Larger aircraft typically create higher amplitude and longer duration booms than smaller aircraft at the same flight conditions.
4. Higher Mach numbers create longer duration signals, and higher altitudes decrease the boom magnitudes.

These observations are for sonic booms produced by near steady flight conditions. Although some focused signatures are included in this boom data, more work is need to identify the effect of aircraft maneuvering on sonic booms. This future work would help to quantify the size of the impact area and the physical effects of focused sonic booms, which often occur in supersonic military operating areas.

The complete BOOMFILE database is available on floppy diskette from Det 1 AL/BBE upon request. Such requests should be sent to:

Det 1 AL/BBE  
Area B, Bldg 441  
Wright-Patterson AFB, OH 45433-6573  
PHONE: (513) 255-3664, FAX: (513) 255-2781.

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## REFERENCES

1. Lee, R., Crabill, M., Mazurek, D., Palmer, B., and Price, D. "Boom Event Analyzer Recorder (BEAR): System Description," AAMRL-TR-89-035. August 1989.
2. Lee, Robert A. "Air Force Boom Event Analyzer Recorder (BEAR): Comparison with NASA Boom Measurement System," AAMRL-TR-88-039. July 1988.
3. Maglieri, Domenic J. "Sonic Boom Flight Research--Some Effects of Airplane Operations and the Atmosphere on Sonic Boom Signatures," NASA-SP 147. 1968.
4. Pierce, Allan D. And Maglieri, Domenic J. "Effects of Atmospheric Irregularities on Sonic-Boom Propagation," JASA, vol. 51, no. 2 (part 3). 1972. PP. 702-721.
5. Galloway, William., Et. Al., "Assessment of Community Response to High Energy Impulsive Sounds," Report of Working Group 84, Committee on Hearing, Bioacoustics, and Biomechanics, Assembly of Behavioral and Social Sciences, National Research Council. National Academy Press. Washington, DC, 1981.
6. Carlson, Harry W. "Simplified Sonic-Boom Prediction," NASA-TP 1122. 1978.

## APPENDIX A

### Systems Description

#### Description of BEAR

The Boom Event Analyzer Recorder (BEAR) is a 16 bit microprocessor based instrument that continuously samples the background noise then captures and stores the digital waveform of any loud impulsive noise. The recorder can discern a sonic boom from the normal background noise and capture it in permanent solid state random access memory (RAM) storage for later analysis. The RAM modules can then be interfaced with a Data Retrieval Unit (DRU) and the information on the DRU transferred to a microcomputer. The microcomputer displays each recorded event, time of occurrence and summary information for all the data events. Each event is stored in a separate file and given a specific file name corresponding to the date, time, and location of its occurrence according to the following scheme: PSSHHmmI.MDD, where P indicates a processed event, SS = site number, HHmm = local time in hours and minutes, I = incrementer (A..Z) to differentiate between events that occurred in the same minute at the same location, and MDD = month and day. Det 1 AL/BBE also developed several hardware items and software programs for use with the BEAR systems. These items include a security case, windscreen, sunscreen, battery charger (for proper battery charging) and multiple boom processing programs.

The BEAR digitizes the noise environment at 8 kHz and analyzes it during the downtime between the sampling intervals (125 microseconds) giving it real time screening for sonic boom events. The BEAR examines the event level, duration, positive pulse time and risetime to determine if it should be stored as a boom event. These four parameters are selected via the input key pad to make the BEAR a very flexible instrument with which to capture a wide variety of impulsive events. Along with setting the boom evaluation criteria, the key pad allows input of date, time, test number, location and serial number of the unit. This information is stored in the same RAM modules as data every time any parameter is changed. The operator can also select two other modes from this key pad: calibration or data save. In the calibration mode the BEAR simply displays the root-mean-square level of two seconds of the input signal to the microphone for checking against a standard 124 dB sound pressure level pistonphone calibrator. No data is saved to the RAM modules in this mode. The second mode allows the operator to collect one second of data with no screening. This allows the operator to collect and store background noise, the calibrator signal or anything else that is desired. The BEAR unit, upon startup, runs through an

internal self test routine that verifies all the hardware components; then, cues the operator that it is "READY" for date, time and parameter inputs.

The BEAR has a frequency response of 0.5 Hz to 2,500 Hz for reproducing a sonic boom time-history adequate for environmental impact analysis. The maximum overpressure the BEAR can accurately record is 165.3 dB (76.9 pounds per square foot or 3639 Pascals) with an 80 dB usable dynamic range. The RAM modules on a single unit have 512K of memory allowing the BEAR to store over 100 "normal" sonic booms (duration of .250 seconds) or 32 "save" events (1 second of data stored via keypad save routine).

The BEAR is designed to operate with a PCB Inc, model # 106850, piezoelectric microphone that is totally sealed and extremely rugged making the BEAR able to operate in the environmental extremes of temperature typical of USAF supersonic areas (0 - 65 degrees C.). This microphone is used with the BEAR systems in an inverted position. This essentially collects the pressure waveform being reflected from the steel base plate. This procedure produces virtually identical results over this frequency range with that measured by a flush mounted microphone and is much easier to set up. The low profile also helps in reducing the wind noise (a major contributor of low frequency noise) to the microphone system. The BEAR system and microphone setup were validated in a test conducted at Edwards AFB, CA in Sep 1986.

The BEAR is designed such that after turning the unit on it will do an internal self analysis and come up ready to capture sonic boom data. This internal analysis checks the BEAR EPROM, all internal hardware operation, and the RAM modules. If the RAM modules contain valid data no other check is made to the modules. If the modules are empty the BEAR will write valid data to each address of the modules, read and compare each location, write zero's to all addresses and verify that the zeros were written. The BEAR will then initialize the RAM modules writing the setup parameters to the first address space. The BEAR will now display a "READY" message and is ready to collect sonic boom data. The BEAR default parameters are set for normal unattended use for the majority of USAF supersonic operations. For this use the operator need only place the unit at the monitoring location, turn it on, set the "A" parameters for current date and time and set the "B" parameters for specific test number and site number for later identification. This default mode will capture any sonic boom greater than 0.1 PSF (107 dB). If the boom is larger than 76.9 PSF, the BEAR will capture the event but the top of the N wave will be clipped. The BEAR will operate unattended for 1 day on the internal rechargeable

small batteries and for 8 days on the 3 external rechargeable batteries. The batteries operating the removable RAM modules are good for approximately 7 years.

#### Description of SBM-1

The SBM-1 monitor is a level triggered Larson-Davis model 700 noise dosimeter that has been modified to operate with a PCB Piezo resistive microphone. This monitor can record the overpressure of a sonic boom along with the time integrated metric of C-weighted Sound Exposure Level (CSEL) or A-weighted Sound Exposure Level (ASEL). The SBM-1 stores these single metrics along with the time of the event in its internal RAM memory. This information, (Peak level, integrated metric, time of event, and location) is then downloaded to a portable computer via its RS-232 communication port. This information on each of the sonic booms is finally stored on the microcomputer in a formatted ASCII file that can be read by most word processors.

The SBM-1 is designed to operate with a PCB Inc, model # 106850, piezoelectric microphone that is totally sealed and extremely rugged making the SBM-1 able to operate in the environmental extremes of temperature typical of USAF supersonic areas (0 - 65 degrees C.). This microphone is used with the SBM-1 systems in an inverted position. This essentially evaluates the pressure waveform being reflected from the steel base plate. This procedure produces virtually identical results for sonic booms with that measured by a flush mounted microphone and is much easier to set up. The low profile also helps in reducing the wind noise (a major contributor of low frequency noise) to the microphone system. With this PCB microphone the SBM-1 has a dynamic range of 55 dB to 165 dB allowing the monitor to measure up to a 74 PSF overpressure. Events larger than 74 PSF will be clipped to this limit. The microphone will withstand overpressures up to 660 PSF (184 dB) before damage will occur.

The SBM-1 has an internal clock that can be used to start and stop the monitoring over any preset period. Det 1 AL/BBE has developed a program for setting up these monitors via a computer. This program allows the units to be setup in the laboratory and transported to the field for later startup. This process eliminates the miscellaneous triggering that occurs during transportation. Since these units are only level triggered many non boom events are often recorded. These events must be screened by the user by comparing the time of the recorded event with expected boom activity.

# APPENDIX B: AIRCRAFT TRACKING DATA

F-4 AT 1.24M AT 29.2K MSL

BOOM AT SITE 00 AT 0748 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:46:20	1.120	149645.	-349.	28661.	2.5	0.1045	258.
7:46:21	1.124	148502.	-322.	28712.	2.4	0.1029	258.
7:46:22	1.127	147356.	-296.	28760.	2.3	0.0852	258.
7:46:23	1.130	146207.	-272.	28805.	2.1	0.0536	258.
7:46:24	1.131	145056.	-249.	28847.	1.9	0.0239	258.
7:46:25	1.132	143904.	-227.	28885.	1.7	0.0116	258.
7:46:26	1.132	142751.	-204.	28916.	1.4	0.0273	258.
7:46:27	1.134	141597.	-180.	28941.	1.0	0.0608	258.
7:46:28	1.136	140441.	-154.	28959.	0.7	0.0931	258.
7:46:29	1.140	139282.	-128.	28970.	0.4	0.1021	258.
7:46:30	1.143	138120.	-102.	28976.	0.2	0.0881	258.
7:46:31	1.145	136955.	-75.	28978.	0.1	0.0634	258.
7:46:32	1.147	135788.	-47.	28980.	0.1	0.0421	258.
7:46:33	1.148	134619.	-19.	28984.	0.2	0.0427	258.
7:46:34	1.150	133450.	10.	28989.	0.3	0.0628	258.
7:46:35	1.152	132278.	40.	28998.	0.5	0.0782	258.
7:46:36	1.154	131104.	71.	29009.	0.6	0.0766	258.
7:46:37	1.156	129927.	102.	29021.	0.6	0.0499	258.
7:46:38	1.157	128749.	134.	29033.	0.6	0.0072	258.
7:46:39	1.157	127571.	167.	29045.	0.5	-0.0245	258.
7:46:40	1.157	126393.	201.	29056.	0.5	-0.0151	258.
7:46:41	1.157	125216.	236.	29064.	0.3	0.0441	258.
7:46:42	1.160	124037.	273.	29070.	0.2	0.1183	259.
7:46:43	1.164	122855.	310.	29073.	0.1	0.1502	259.
7:46:44	1.168	121668.	347.	29075.	0.1	0.1336	259.
7:46:45	1.172	120476.	384.	29076.	0.0	0.0873	258.
7:46:46	1.174	119282.	418.	29075.	0.0	0.0419	258.
7:46:47	1.175	118086.	447.	29074.	-0.1	0.0233	258.
7:46:48	1.175	116890.	469.	29072.	-0.1	0.0231	258.
7:46:49	1.176	115692.	481.	29071.	0.0	0.0272	257.
7:46:50	1.177	114494.	482.	29072.	0.1	0.0279	256.
7:46:51	1.178	113295.	472.	29076.	0.3	0.0208	256.
7:46:52	1.178	112095.	453.	29086.	0.6	0.0252	256.
7:46:53	1.179	110895.	428.	29103.	1.0	0.0456	255.
7:46:54	1.181	109694.	400.	29127.	1.3	0.0616	255.
7:46:55	1.184	108491.	371.	29157.	1.5	0.0722	255.
7:46:56	1.186	107286.	342.	29191.	1.6	0.0795	255.
7:46:57	1.189	106078.	314.	29224.	1.5	0.0628	255.
7:46:58	1.190	104868.	287.	29254.	1.2	0.0183	255.
7:46:59	1.191	103657.	262.	29277.	0.9	-0.0115	255.
7:47:00	1.190	102446.	239.	29291.	0.4	-0.0028	255.

(CONTINUED)

F-4 AT 1.24M AT 29.2K MSL

(CONTINUED)

BOOM AT SITE 00 AT 0748 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
7:47:01	1.191	101235.	216.	29296.	0.0	0.0416 256.
7:47:02	1.193	100023.	194.	29294.	-0.3	0.0976 256.
7:47:03	1.196	98808.	172.	29285.	-0.5	0.1314 256.
7:47:04	1.201	97588.	149.	29273.	-0.6	0.1188 256.
7:47:05	1.203	96365.	126.	29260.	-0.5	0.0634 255.
7:47:06	1.204	95140.	102.	29250.	-0.4	0.0047 255.
7:47:07	1.204	93915.	78.	29244.	-0.2	-0.0240 256.
7:47:08	1.203	92690.	56.	29242.	0.0	-0.0131 256.
7:47:09	1.203	91466.	35.	29243.	0.1	0.0308 256.
7:47:10	1.205	90240.	18.	29247.	0.1	0.0903 256.
7:47:11	1.209	89012.	5.	29249.	0.1	0.1148 256.
7:47:12	1.212	87780.	-2.	29249.	-0.1	0.0854 256.
7:47:13	1.214	86545.	-4.	29245.	-0.3	0.0318 257.
7:47:14	1.214	85309.	-1.	29236.	-0.5	0.0007 257.
7:47:15	1.214	84073.	7.	29224.	-0.6	0.0042 257.
7:47:16	1.214	32837.	18.	29208.	-0.7	0.0275 257.
7:47:17	1.215	81600.	31.	29191.	-0.8	0.0625 257.
7:47:18	1.218	80361.	44.	29175.	-0.7	0.0980 257.
7:47:19	1.221	79119.	56.	29159.	-0.7	0.1125 257.
7:47:20	1.224	77873.	68.	29146.	-0.6	0.1016 257.
7:47:21	1.227	76625.	80.	29134.	-0.5	0.0539 257.
7:47:22	1.227	75374.	92.	29124.	-0.4	-0.0011 257.
7:47:23	1.227	74123.	106.	29115.	-0.4	-0.0192 257.
7:47:24	1.227	72873.	122.	29107.	-0.4	0.0041 257.
7:47:25	1.227	71623.	140.	29097.	-0.5	0.0320 258.
7:47:26	1.228	70372.	159.	29085.	-0.6	0.0409 258.
7:47:27	1.230	69119.	177.	29070.	-0.8	0.0475 258.
7:47:28	1.231	67865.	195.	29050.	-0.9	0.0494 258.
7:47:29	1.232	66610.	213.	29028.	-1.0	0.0402 257.
7:47:30	1.233	65353.	230.	29006.	-0.9	0.0391 257.
7:47:31	1.234	64095.	246.	28987.	-0.7	0.0453 257.
7:47:32	1.236	62836.	262.	28976.	-0.3	0.0594 257.
7:47:33	1.238	61574.	277.	28973.	0.1	0.0532 257.
7:47:34	1.239	60311.	293.	28978.	0.4	0.0095 257.
7:47:35	1.238	59048.	308.	28991.	0.7	-0.0618 257.
7:47:36	1.235	57787.	324.	29007.	0.8	-0.1061 257.
7:47:37	1.232	56528.	340.	29025.	0.8	-0.0942 257.
7:47:38	1.230	55273.	356.	29043.	0.8	-0.0478 257.
7:47:39	1.230	54020.	372.	29061.	0.8	-0.0021 257.
7:47:40	1.230	52766.	389.	29081.	0.9	0.0324 257.
7:47:41	1.232	51512.	406.	29101.	0.9	0.0426 257.

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F-4 AT 1.24M AT 29.2K MSL  
BCOM AT SITE 00 AT 0748 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:47:42	1.233	50256.	423.	29122.	0.9	0.0454	257.
7:47:43	1.235	48999.	441.	29141.	0.8	0.0357	257.
7:47:44	1.236	47741.	458.	29157.	0.6	0.0143	257.
7:47:45	1.236	46482.	476.	29169.	0.4	-0.0022	258.
7:47:46	1.236	45223.	494.	29177.	0.3	-0.0048	258.
7:47:47	1.236	43964.	513.	29181.	0.1	0.0044	258.
7:47:48	1.236	42705.	533.	29183.	0.1	0.0164	258.
7:47:49	1.237	41446.	555.	29186.	0.1	0.0139	258.
7:47:50	1.237	40186.	575.	29189.	0.2	-0.0089	258.
7:47:51	1.236	38927.	598.	29194.	0.2	-0.0251	258.
7:47:52	1.236	37668.	620.	29200.	0.3	-0.0164	258.
7:47:53	1.235	36410.	643.	29206.	0.3	0.0035	258.
7:47:54	1.236	35152.	665.	29213.	0.3	0.0190	258.
7:47:55	1.237	33893.	688.	29220.	0.3	0.0233	258.
7:47:56	1.237	32633.	711.	29227.	0.4	0.0270	258.
7:47:57	1.238	31373.	734.	29236.	0.4	0.0395	258.
7:47:58	1.240	30111.	758.	29246.	0.4	0.0486	258.
7:47:59	1.241	28848.	782.	29254.	0.3	0.0297	258.
7:48:00	1.242	27584.	808.	29260.	0.2	-0.0246	258.
7:48:01	1.240	26320.	834.	29264.	0.1	-0.0679	258.
7:48:02	1.238	25059.	861.	29265.	0.0	-0.0721	258.
7:48:03	1.236	23800.	888.	29266.	0.0	-0.0375	258.
7:48:04	1.236	22542.	917.	29266.	0.0	0.0276	258.
7:48:05	1.237	21283.	946.	29266.	0.0	0.0758	258.
7:48:06	1.240	20022.	975.	29267.	0.1	0.0565	258.
7:48:07	1.241	18760.	1005.	29269.	0.1	0.0112	258.
7:48:08	1.241	17496.	1035.	29272.	0.2	-0.0105	258.
7:48:09	1.241	16234.	1066.	29277.	0.2	0.0035	258.
7:48:10	1.241	14971.	1097.	29282.	0.3	0.0189	258.
7:48:11	1.242	13707.	1128.	29288.	0.2	0.0065	258.
7:48:12	1.242	12443.	1158.	29293.	0.2	-0.0172	258.
7:48:13	1.241	11180.	1189.	29298.	0.2	-0.0039	258.
7:48:14	1.242	9917.	1222.	29300.	0.1	0.0319	258.
7:48:15	1.242	8653.	1257.	29301.	0.0	0.0179	258.
7:48:16	1.242	7389.	1295.	29300.	0.0	-0.0673	259.
7:48:17	1.238	6127.	1336.	29301.	0.1	-0.1802	259.
7:48:18	1.231	4870.	1375.	29307.	0.4	-0.2762	258.
7:48:19	1.222	3622.	1405.	29322.	0.9	-0.3492	258.
7:48:20	1.210	2385.	1414.	29349.	1.6	-0.3913	256.
7:48:21	1.198	1162.	1387.	29390.	2.3	-0.4099	254.
7:48:22	1.185	-45.	1309.	29447.	3.0	-0.4113	251.

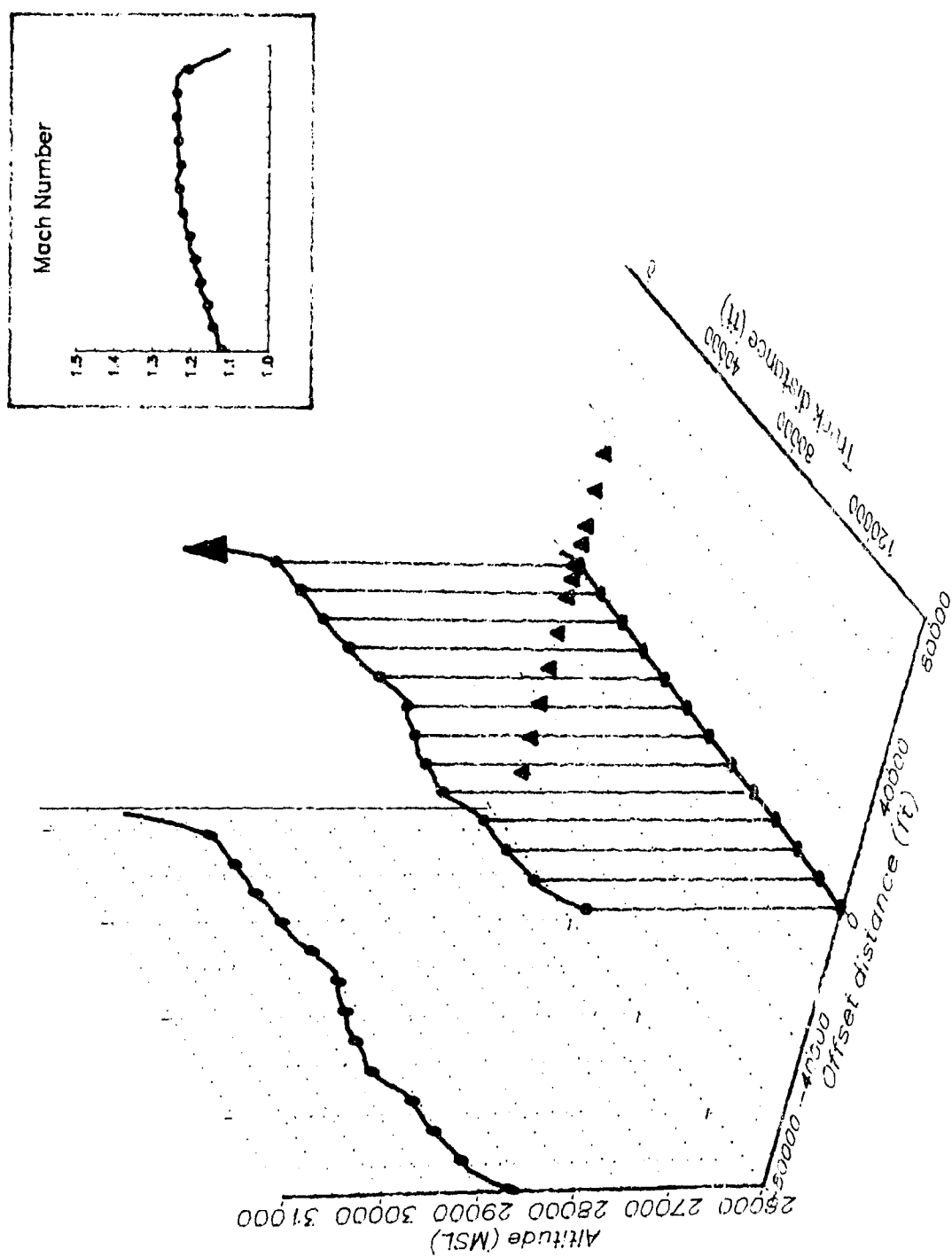
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F-4 AT 1.24M AT 29.2K MSL  
BOOM AT SITE 00 AT 0748 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
7:48:23	1.173	-1232.	1170.	29516.	3.6	-.4032 248.
7:48:24	1.160	-2393.	964.	29598.	4.1	-.3929 244.
7:48:25	1.148	-3526.	692.	29688.	4.6	-.3961 241.
7:48:26	1.136	-4625.	358.	29786.	5.0	-.4048 237.
7:48:27	1.123	-5688.	-35.	29891.	5.3	-.3743 234.
7:48:28	1.113	-6713.	-483.	30002.	5.7	-.2826 230.
7:48:29	1.105	-7698.	-986.	30118.	6.0	-.1543 227.





F-4 AT 1.29M AT 29.3K MSL  
BOOM AT SITE 00 AT 0758 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:56:28	1.315	147627.	599.	29570.	-2.4	0.0120	255.
7:56:29	1.315	146290.	571.	29512.	-2.4	0.0126	255.
7:56:30	1.315	144953.	545.	29454.	-2.5	0.0170	256.
7:56:31	1.315	143616.	520.	29396.	-2.5	0.0303	256.
7:56:32	1.316	142277.	497.	29337.	-2.5	0.0443	256.
7:56:33	1.316	140938.	476.	29276.	-2.6	0.0467	256.
7:56:34	1.317	139596.	455.	29214.	-2.6	0.0366	256.
7:56:35	1.318	138254.	436.	29150.	-2.7	0.0229	256.
7:56:36	1.318	136911.	417.	29086.	-2.7	0.0104	256.
7:56:37	1.317	135567.	399.	29025.	-2.5	-.0014	256.
7:56:38	1.317	134224.	381.	28969.	-2.1	-.0096	256.
7:56:39	1.316	132880.	363.	28924.	-1.7	-.0011	256.
7:56:40	1.316	131536.	346.	28891.	-1.1	0.0041	256.
7:56:41	1.316	130191.	328.	28870.	-0.6	0.0006	256.
7:56:42	1.316	128847.	310.	28860.	-0.3	-.0056	256.
7:56:43	1.316	127503.	291.	28856.	-0.1	-.0108	256.
7:56:44	1.315	126159.	273.	28854.	-0.1	-.0094	256.
7:56:45	1.315	124815.	256.	28852.	-0.1	-.0021	256.
7:56:46	1.315	123472.	239.	28847.	-0.3	0.0002	256.
7:56:47	1.315	122128.	224.	28838.	-0.5	-.0071	256.
7:56:48	1.315	120785.	211.	28825.	-0.6	-.0060	256.
7:56:49	1.315	119442.	199.	28811.	-0.6	0.0134	256.
7:56:50	1.315	118098.	188.	28798.	-0.5	0.0232	256.
7:56:51	1.316	116754.	178.	28786.	-0.4	-.0013	256.
7:56:52	1.315	115409.	170.	28776.	-0.3	-.0446	256.
7:56:53	1.313	114067.	165.	28769.	-0.2	-.0770	256.
7:56:54	1.310	112726.	164.	28764.	-0.2	-.0785	257.
7:56:55	1.308	111388.	168.	28761.	-0.1	-.0503	257.
7:56:56	1.307	110051.	176.	28757.	-0.2	-.0183	257.
7:56:57	1.307	108715.	190.	28752.	-0.3	0.0001	257.
7:56:58	1.307	107379.	207.	28745.	-0.4	-.0020	258.
7:56:59	1.307	106043.	227.	28734.	-0.5	-.0136	258.
7:57:00	1.306	104708.	249.	28721.	-0.6	-.0130	258.
7:57:01	1.306	103373.	273.	28705.	-0.6	0.0052	258.
7:57:02	1.306	102038.	297.	28691.	-0.5	0.0083	258.
7:57:03	1.306	100703.	320.	28682.	-0.2	-.0183	258.
7:57:04	1.305	99368.	344.	28682.	0.3	-.0631	258.
7:57:05	1.302	98036.	368.	28695.	0.8	-.0996	258.
7:57:06	1.299	96707.	392.	28722.	1.5	-.0968	258.
7:57:07	1.297	95381.	417.	28763.	2.0	-.0683	258.
7:57:08	1.296	94058.	442.	28814.	2.3	-.0372	258.

(CONTINUED)

F-4 AT 1.29M AT 29.3K MSL  
 BOOM AT SITE 00 AT 0758 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:57:09	1.295	92736.	469.	28870.	2.4	-.0237	258.
7:57:10	1.295	91415.	496.	28925.	2.3	-.0410	258.
7:57:11	1.293	90096.	525.	28978.	2.2	-.0662	258.
7:57:12	1.292	88778.	554.	29028.	2.1	-.0659	258.
7:57:13	1.290	87462.	584.	29078.	2.1	-.0486	258.
7:57:14	1.289	86148.	615.	29128.	2.2	-.0479	258.
7:57:15	1.288	84836.	647.	29182.	2.4	-.0610	258.
7:57:16	1.287	83526.	679.	29238.	2.4	-.0571	258.
7:57:17	1.286	82218.	712.	29293.	2.3	-.0293	258.
7:57:18	1.286	80910.	744.	29345.	2.1	0.0013	258.
7:57:19	1.286	79602.	775.	29390.	1.7	0.0112	258.
7:57:20	1.287	78293.	806.	29425.	1.3	0.0012	258.
7:57:21	1.287	76984.	837.	29451.	0.9	-.0195	258.
7:57:22	1.286	75676.	869.	29470.	0.7	-.0424	258.
7:57:23	1.285	74369.	903.	29486.	0.7	-.0591	258.
7:57:24	1.283	73064.	938.	29503.	0.8	-.0461	258.
7:57:25	1.282	71760.	974.	29525.	1.1	-.0029	258.
7:57:26	1.283	70457.	1011.	29552.	1.3	0.0395	258.
7:57:27	1.285	69152.	1048.	29585.	1.5	0.0565	258.
7:57:28	1.287	67846.	1085.	29620.	1.5	0.0323	258.
7:57:29	1.287	66539.	1122.	29653.	1.3	-.0214	258.
7:57:30	1.286	65232.	1159.	29681.	1.0	-.0565	258.
7:57:31	1.284	63927.	1198.	29701.	0.6	-.0567	258.
7:57:32	1.283	62624.	1238.	29709.	0.1	-.0325	259.
7:57:33	1.283	61321.	1279.	29704.	-0.5	0.0063	259.
7:57:34	1.283	60019.	1321.	29685.	-1.1	0.0416	259.
7:57:35	1.285	58715.	1363.	29653.	-1.6	0.0698	259.
7:57:36	1.287	57410.	1406.	29612.	-1.9	0.0874	259.
7:57:37	1.289	56101.	1448.	29567.	-1.9	0.0698	259.
7:57:38	1.290	54791.	1491.	29525.	-1.6	0.0242	259.
7:57:39	1.290	53480.	1534.	29491.	-1.2	-.0202	259.
7:57:40	1.289	52169.	1577.	29469.	-0.7	-.0445	259.
7:57:41	1.287	50859.	1622.	29458.	-0.3	-.0279	259.
7:57:42	1.287	49550.	1669.	29457.	0.1	0.0154	259.
7:57:43	1.288	48240.	1716.	29463.	0.4	0.0519	259.
7:57:44	1.290	46930.	1762.	29472.	0.4	0.0519	259.
7:57:45	1.291	45617.	1808.	29483.	0.4	0.0238	259.
7:57:46	1.292	44304.	1852.	29491.	0.3	-.0066	259.
7:57:47	1.291	42990.	1896.	29494.	0.0	-.0172	259.
7:57:48	1.291	41678.	1940.	29490.	-0.4	0.0091	259.
7:57:49	1.292	40365.	1984.	29477.	-0.7	0.0466	259.

(CONTINUED)

F-4 AT 1.29M AT 29.3K MSL  
BOOM AT SITE 00 AT 0758 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:57:50	1.293	39050.	2029.	29458.	-0.9	0.0592	259.
7:57:51	1.295	37734.	2074.	29436.	-1.0	0.0569	259.
7:57:52	1.296	36416.	2120.	29413.	-0.9	0.0305	259.
7:57:53	1.296	35097.	2167.	29394.	-0.8	0.0039	259.
7:57:54	1.296	33778.	2215.	29377.	-0.7	0.0024	259.
7:57:55	1.296	32459.	2265.	29362.	-0.6	-.0196	259.
7:57:56	1.295	31141.	2316.	29350.	-0.5	-.0456	259.
7:57:57	1.294	29823.	2368.	29340.	-0.4	-.0365	259.
7:57:58	1.293	28508.	2421.	29332.	-0.3	-.0151	259.
7:57:59	1.293	27192.	2475.	29325.	-0.2	0.0022	259.
7:58:00	1.293	25877.	2528.	29321.	-0.2	0.0386	259.
7:58:01	1.295	24560.	2583.	29318.	-0.1	0.0684	259.
7:58:02	1.297	23241.	2638.	29318.	0.0	0.0476	259.
7:58:03	1.298	21921.	2694.	29318.	0.0	0.0023	259.
7:58:04	1.297	20601.	2752.	29318.	0.0	-.0216	259.
7:58:05	1.296	19281.	2811.	29317.	-0.1	-.0164	259.
7:58:06	1.296	17962.	2872.	29313.	-0.3	-.0040	259.
7:58:07	1.296	16644.	2933.	29304.	-0.5	0.0019	260.
7:58:08	1.296	15325.	2996.	29292.	-0.6	0.0026	260.
7:58:09	1.296	14006.	3061.	29275.	-0.7	0.0078	260.
7:58:10	1.296	12687.	3127.	29258.	-0.8	0.0249	260.
7:58:11	1.297	11368.	3194.	29241.	-0.7	0.0489	260.
7:58:12	1.299	10047.	3262.	29225.	-0.6	0.0573	260.
7:58:13	1.300	8724.	3331.	29213.	-0.5	0.0313	260.
7:58:14	1.300	7400.	3401.	29204.	-0.3	-.0467	260.
7:58:15	1.297	6078.	3470.	29200.	-0.1	-.1924	260.
7:58:16	1.288	4762.	3540.	29202.	0.2	-.3709	260.
7:58:17	1.274	3458.	3610.	29211.	0.6	-.5302	260.
7:58:18	1.256	2170.	3680.	29228.	0.9	-.6417	260.
7:58:19	1.236	903.	3751.	29254.	1.3	-.6917	260.
7:58:20	1.215	-341.	3820.	29288.	1.7	-.6909	260.
7:58:21	1.194	-1564.	3888.	29330.	2.1	-.6860	260.
7:58:22	1.173	-2764.	3954.	29380.	2.5	-.6851	260.

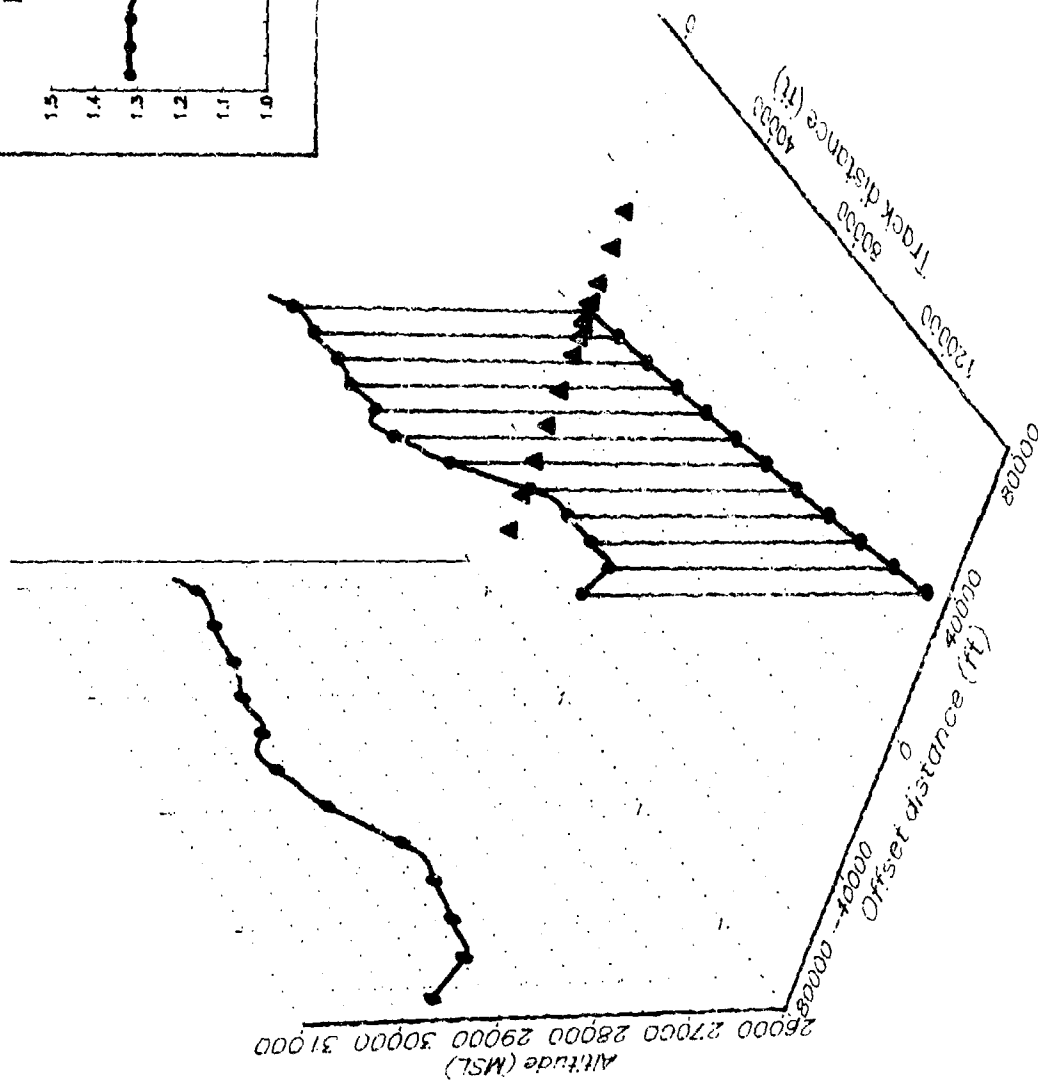
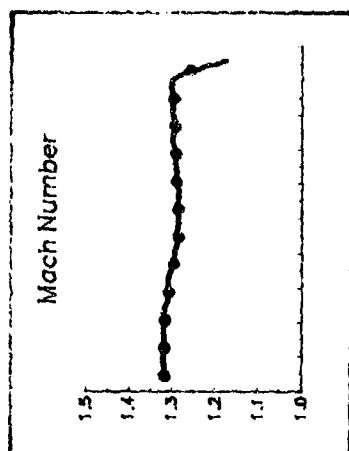


Figure B-2. F-4 on 3 Aug 87 at 0758

F-4 @ 0808 on 3 AUG 87

"ABORTED RUN"

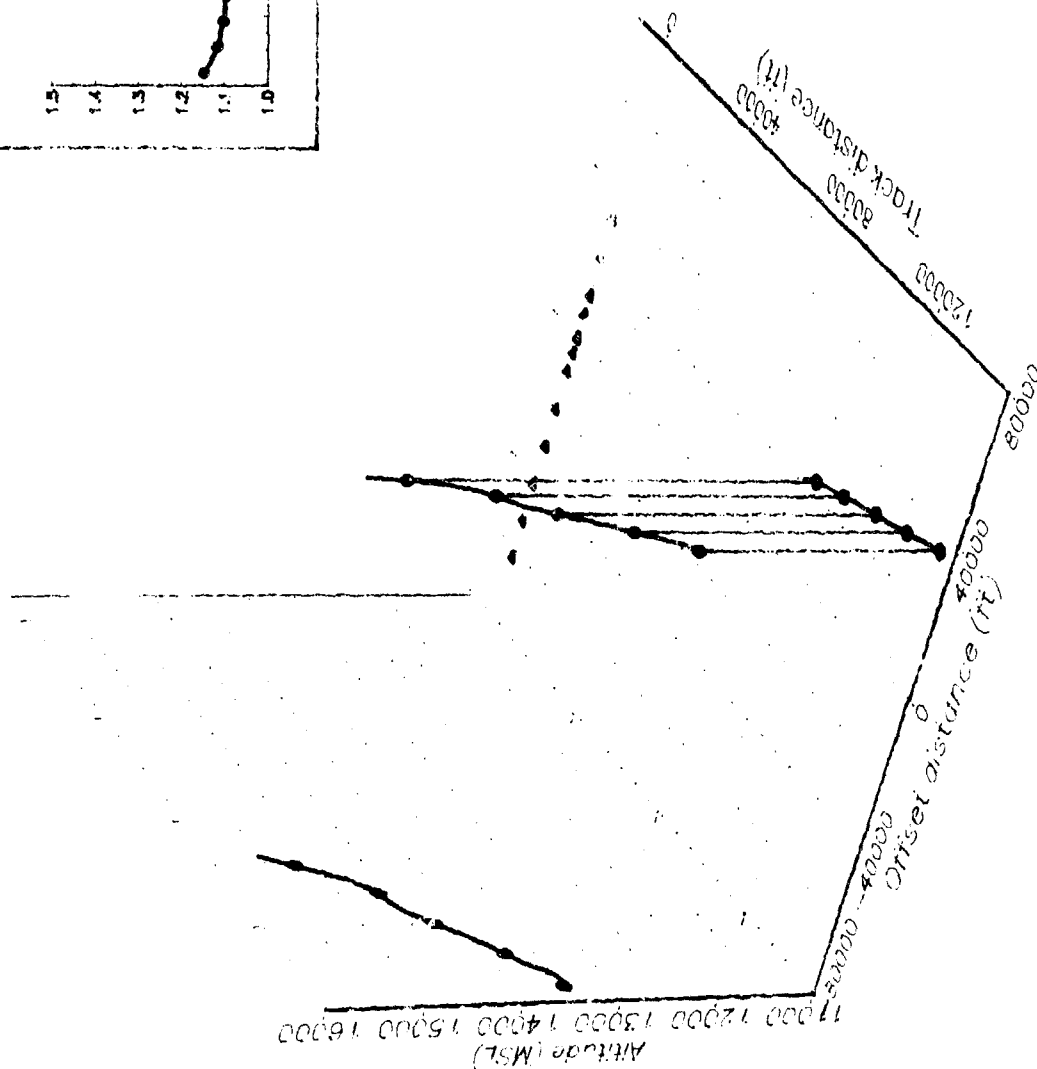
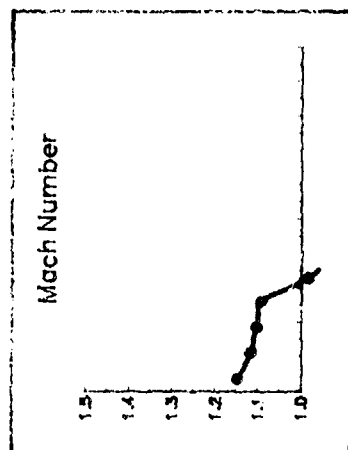


Figure B-3. F-4 on 3 Aug 87 at 0808

F-4 AT 1.1M AT 14.4K MSL

BOOM AT SITE 00 AT 1029 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:27:53	1.112	148892.	-7474.	15687.	-0.9	-.0037	272.
10:27:54	1.112	147704.	-7165.	15659.	-1.8	0.0031	272.
10:27:55	1.112	146516.	-6855.	15612.	-2.7	-.0032	272.
10:27:56	1.112	145330.	-6543.	15546.	-3.5	-.0048	272.
10:27:57	1.112	144145.	-6230.	15462.	-4.4	0.0212	272.
10:27:58	1.113	142961.	-5915.	15362.	-5.1	0.0623	272.
10:27:59	1.116	141777.	-5599.	15246.	-5.8	0.0933	272.
10:28:00	1.119	140591.	-5282.	15117.	-6.3	0.1110	272.
10:28:01	1.122	139404.	-4963.	14979.	-6.6	0.1152	272.
10:28:02	1.124	138213.	-4642.	14835.	-6.8	0.1054	273.
10:28:03	1.126	137020.	-4320.	14691.	-6.7	0.0877	273.
10:28:04	1.127	135823.	-3995.	14549.	-6.4	0.0574	273.
10:28:05	1.127	134625.	-3670.	14414.	-6.1	0.0134	273.
10:28:06	1.127	133424.	-3345.	14288.	-5.6	-.0109	273.
10:28:07	1.125	132223.	-3024.	14172.	-5.2	0.0065	272.
10:28:08	1.125	131018.	-2710.	14066.	-4.7	0.0359	272.
10:28:09	1.126	129809.	-2405.	13970.	-4.2	0.0543	271.
10:28:10	1.127	128593.	-2113.	13886.	-3.6	0.0430	271.
10:28:11	1.127	127373.	-1833.	13816.	-2.9	0.0000	270.
10:28:12	1.126	126148.	-1565.	13762.	-2.1	-.0508	269.
10:28:13	1.123	124923.	-1307.	13727.	-1.2	-.1052	269.
10:28:14	1.120	123699.	-1057.	13711.	-0.4	-.1435	269.
10:28:15	1.115	122478.	-812.	13711.	0.3	-.1450	269.
10:28:16	1.112	121261.	-572.	13724.	0.9	-.1025	268.
10:28:17	1.110	120046.	-338.	13746.	1.2	-.0418	268.
10:28:18	1.110	118831.	-113.	13774.	1.4	-.0029	267.
10:28:19	1.110	117614.	99.	13806.	1.6	0.0017	267.
10:28:20	1.110	116394.	295.	13841.	1.6	-.0367	266.
10:28:21	1.109	115172.	471.	13876.	1.6	-.0782	265.
10:28:22	1.107	113949.	626.	13910.	1.6	-.0830	264.
10:28:23	1.106	112726.	758.	13942.	1.4	-.0727	263.
10:28:24	1.104	111503.	866.	13970.	1.2	-.0678	261.
10:28:25	1.102	110279.	950.	13992.	1.0	-.0762	260.
10:28:26	1.101	109057.	1008.	14010.	0.7	-.0772	259.
10:28:27	1.099	107837.	1042.	14024.	0.6	-.0561	258.
10:28:28	1.098	106617.	1051.	14034.	0.5	-.0356	257.
10:28:29	1.097	105399.	1038.	14044.	0.4	-.0348	255.
10:28:30	1.097	104183.	1006.	14053.	0.5	-.0371	255.
10:28:31	1.095	102240.	924.	14069.	0.5	-.0457	254.
10:28:32	1.094	101029.	863.	14080.	0.5	-.0481	253.
10:28:33	1.093	99819.	798.	14090.	0.5	-.0271	253.

(CONTINUED)



F-4 AT 1.1M AT 14.4K MSL  
BOOM AT SITE 00 AT 1029 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
10:28:34	1.093	98610.	733.	14100.	0.4	0.0141 253.
10:28:35	1.094	97400.	670.	14107.	0.4	0.0429 254.
10:28:36	1.095	96189.	609.	14114.	0.3	0.0280 254.
10:28:37	1.095	94977.	548.	14121.	0.3	-0.0189 254.
10:28:38	1.094	93766.	489.	14128.	0.4	-0.0542 254.
10:28:39	1.092	92556.	429.	14138.	0.6	-0.0510 254.
10:28:40	1.091	91348.	370.	14152.	0.8	-0.0237 254.
10:28:41	1.091	90141.	310.	14169.	0.9	-0.0029 254.
10:28:42	1.091	88934.	249.	14189.	0.9	-0.0105 254.
10:28:43	1.091	87727.	187.	14208.	0.9	-0.0296 254.
10:28:44	1.090	86522.	126.	14228.	0.9	-0.0308 254.
10:28:45	1.089	85317.	65.	14247.	0.9	-0.0113 254.
10:28:46	1.090	84112.	5.	14267.	0.9	0.0164 254.
10:28:47	1.090	82907.	-56.	14286.	1.0	0.0263 254.
10:28:48	1.091	81702.	-116.	14307.	1.0	-0.0013 254.
10:28:49	1.091	80496.	-177.	14327.	1.0	-0.0454 254.
10:28:50	1.089	79292.	-237.	14347.	0.9	-0.0686 254.
10:28:51	1.087	78090.	-298.	14365.	0.8	-0.0513 254.
10:28:52	1.087	76889.	-357.	14381.	0.7	-0.0073 254.
10:28:53	1.087	75689.	-417.	14393.	0.5	0.0274 254.
10:28:54	1.088	74488.	-475.	14401.	0.3	0.0180 254.
10:28:55	1.088	73286.	-534.	14405.	0.1	-0.0181 254.
10:28:56	1.087	72084.	-592.	14406.	0.0	-0.0340 254.
10:28:57	1.086	70884.	-650.	14405.	-0.1	-0.0203 254.
10:28:58	1.086	69684.	-708.	14402.	-0.2	0.0082 254.
10:28:59	1.037	68484.	-765.	14396.	-0.4	0.0389 254.
10:29:00	1.088	67283.	-822.	14387.	-0.5	0.0445 254.
10:29:01	1.089	66080.	-878.	14376.	-0.6	0.0214 254.
10:29:02	1.089	64877.	-934.	14362.	-0.6	0.0033 254.
10:29:03	1.089	63673.	-990.	14349.	-0.6	0.0085 254.
10:29:04	1.089	62470.	-1046.	14335.	-0.6	0.0184 254.
10:29:05	1.090	61265.	-1102.	14323.	-0.6	0.0221 254.
10:29:06	1.090	60060.	-1158.	14310.	-0.6	0.0210 254.
10:29:07	1.091	58855.	-1213.	14298.	-0.6	0.0149 254.
10:29:08	1.091	57648.	-1268.	14287.	-0.5	0.0123 254.
10:29:09	1.091	56442.	-1323.	14277.	-0.4	0.0119 254.
10:29:10	1.091	55235.	-1377.	14271.	-0.2	0.0000 254.
10:29:11	1.091	54027.	-1431.	14269.	0.0	-0.0158 254.
10:29:12	1.090	52821.	-1485.	14270.	0.2	-0.0302 254.
10:29:13	1.090	51615.	-1539.	14276.	0.3	-0.0268 254.
10:29:14	1.089	50410.	-1591.	14283.	0.3	-0.0005 254.

(CONTINUED)

F-4 AT 1.1M AT 14.4K MSL

(CONTINUED)

BOOM AT SITE 00 AT 1029 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:29:15	1.090	49205.	-1643.	14290.	0.3	0.0275	254.
10:29:16	1.091	48000.	-1694.	14295.	0.2	0.0331	254.
10:29:17	1.091	46793.	-1745.	14297.	0.0	0.0105	254.
10:29:18	1.091	45586.	-1795.	14297.	-0.1	-0.0267	254.
10:29:19	1.090	44379.	-1844.	14294.	-0.1	-0.0525	254.
10:29:20	1.088	43174.	-1892.	14291.	-0.2	-0.0498	254.
10:29:21	1.087	41971.	-1940.	14288.	-0.2	-0.0185	254.
10:29:22	1.087	40768.	-1986.	14284.	-0.1	0.0199	254.
10:29:23	1.088	39565.	-2032.	14282.	-0.1	0.0323	254.
10:29:24	1.089	38360.	-2077.	14281.	0.0	0.0200	254.
10:29:25	1.089	37155.	-2122.	14283.	0.2	0.0083	254.
10:29:26	1.089	35950.	-2167.	14288.	0.3	0.0081	254.
10:29:27	1.090	34744.	-2211.	14297.	0.5	0.0083	254.
10:29:28	1.090	33538.	-2255.	14309.	0.6	0.005	254.
10:29:29	1.090	32332.	-2298.	14322.	0.7	0.0050	254.
10:29:30	1.090	31126.	-2341.	14336.	0.6	-0.0112	254.
10:29:31	1.090	29920.	-2384.	14349.	0.5	-0.0357	254.
10:29:32	1.089	28715.	-2428.	14359.	0.4	-0.0522	254.
10:29:33	1.087	27512.	-2471.	14365.	0.2	-0.0488	254.
10:29:34	1.086	26311.	-2513.	14368.	0.0	-0.0310	255.
10:29:35	1.085	25110.	-2555.	14367.	-0.1	-0.0041	255.
10:29:36	1.086	23909.	-2596.	14363.	-0.2	0.0320	255.
10:29:37	1.087	22707.	-2638.	14359.	-0.3	0.0611	255.
10:29:38	1.089	21504.	-2679.	14352.	-0.2	0.0502	255.
10:29:39	1.090	20299.	-2720.	14349.	-0.1	0.0026	255.
10:29:40	1.089	19094.	-2762.	14348.	0.0	-0.0376	255.
10:29:41	1.088	17890.	-2804.	14350.	0.1	-0.0388	255.
10:29:42	1.087	16687.	-2845.	14352.	0.1	-0.0029	255.
10:29:43	1.088	15484.	-2887.	14354.	0.1	0.0330	255.
10:29:44	1.089	14281.	-2930.	14356.	0.1	0.0325	255.
10:29:45	1.089	13076.	-2972.	14357.	0.0	0.0129	255.
10:29:46	1.089	11871.	-3015.	14357.	0.0	-0.0054	255.
10:29:47	1.089	10666.	-3057.	14356.	-0.1	-0.0176	255.
10:29:48	1.089	9461.	-3100.	14354.	-0.1	-0.0193	255.
10:29:49	1.088	8258.	-3143.	14352.	-0.1	-0.0081	255.
10:29:50	1.088	7054.	-3186.	14351.	0.0	-0.0062	254.
10:29:51	1.088	5851.	-3229.	14351.	0.1	-0.0156	254.
10:29:52	1.087	4648.	-3273.	14354.	0.2	-0.0321	254.
10:29:53	1.086	3446.	-3316.	14359.	0.3	-0.0458	254.
10:29:54	1.085	2246.	-3358.	14368.	0.5	-0.0484	255.

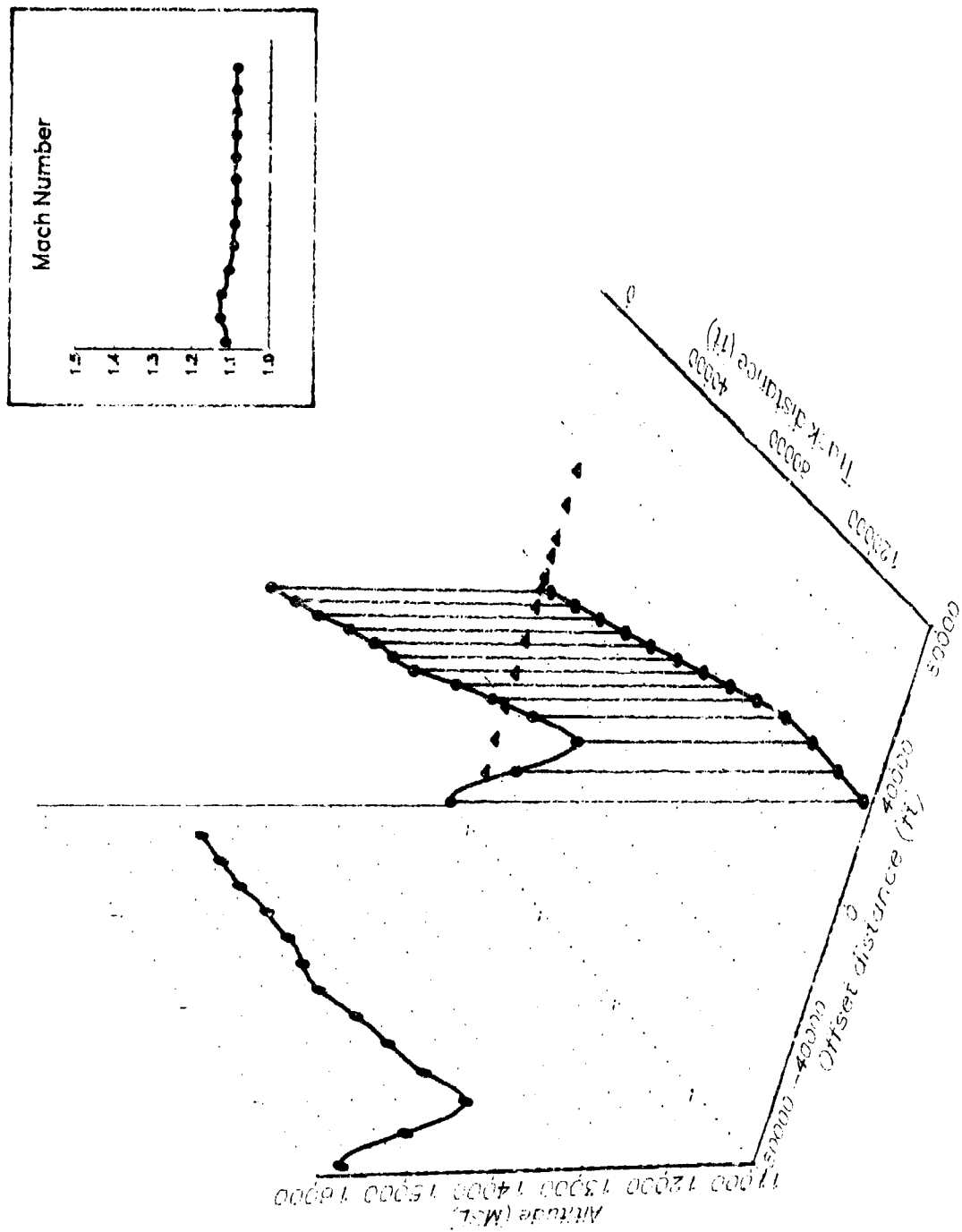


Figure B-4. F-4 on 3 Aug 87 at 1029

F-4 AT 1.37M AT 44.4K MSL  
BOOM AT SITE 00 AT 1043 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:40:58	1.193	148140.	-1387.	45670.	0.6	0.1895	257.
10:40:59	1.199	147035.	-1382.	45678.	0.2	0.1900	257.
10:41:00	1.206	145924.	-1377.	45678.	-0.2	0.1790	257.
10:41:01	1.211	144806.	-1373.	45671.	-0.6	0.1459	257.
10:41:02	1.215	143685.	-1369.	45656.	-0.9	0.1014	257.
10:41:03	1.218	142559.	-1363.	45634.	-1.2	0.0640	257.
10:41:04	1.220	141432.	-1357.	45606.	-1.5	0.0520	257.
10:41:05	1.222	140303.	-1349.	45572.	-1.8	0.0788	257.
10:41:06	1.225	139172.	-1341.	45531.	-2.1	0.1277	257.
10:41:07	1.230	138037.	-1331.	45487.	-2.2	0.1597	257.
10:41:08	1.235	136897.	-1322.	45441.	-2.3	0.1534	257.
10:41:09	1.239	135752.	-1312.	45394.	-2.2	0.1079	257.
10:41:10	1.242	134604.	-1303.	45348.	-2.1	0.0584	257.
10:41:11	1.243	133454.	-1293.	45305.	-2.0	0.0319	257.
10:41:12	1.244	132302.	-1284.	45266.	-1.8	0.0281	257.
10:41:13	1.245	131150.	-1274.	45230.	-1.6	0.0266	257.
10:41:14	1.246	129996.	-1264.	45199.	-1.4	0.0190	257.
10:41:15	1.246	128842.	-1253.	45172.	-1.2	0.0212	257.
10:41:16	1.247	127687.	-1241.	45149.	-1.0	0.0449	257.
10:41:17	1.249	126530.	-1227.	45131.	-0.8	0.0820	257.
10:41:18	1.252	125371.	-1209.	45116.	-0.6	0.1009	258.
10:41:19	1.255	124209.	-1188.	45104.	-0.5	0.0789	258.
10:41:20	1.258	123045.	-1160.	45095.	-0.4	0.0489	258.
10:41:21	1.259	121879.	-1126.	45087.	-0.3	0.0288	259.
10:41:22	1.260	120712.	-1085.	45081.	-0.2	0.0136	259.
10:41:23	1.260	119545.	-1039.	45078.	-0.1	0.0277	259.
10:41:24	1.262	118377.	-988.	45077.	0.0	0.0625	259.
10:41:25	1.264	117207.	-933.	45077.	0.0	0.0733	260.
10:41:26	1.266	116036.	-875.	45078.	0.0	0.0412	260.
10:41:27	1.267	114863.	-817.	45078.	0.0	0.0059	260.
10:41:28	1.267	113689.	-758.	45079.	0.0	0.0059	260.
10:41:29	1.268	112516.	-698.	45078.	0.0	0.0413	260.
10:41:30	1.270	111341.	-639.	45077.	-0.1	0.0790	260.
10:41:31	1.272	110164.	-580.	45074.	-0.1	0.0897	260.
10:41:32	1.275	108984.	-521.	45071.	-0.2	0.0700	260.
10:41:33	1.277	107801.	-461.	45067.	-0.2	0.0369	260.
10:41:34	1.278	106618.	-401.	45063.	-0.2	0.0197	260.
10:41:35	1.279	105434.	-340.	45058.	-0.2	0.0319	260.
10:41:36	1.280	104248.	-277.	45054.	-0.2	0.0616	260.
10:41:37	1.283	103061.	-214.	45049.	-0.2	0.0857	260.
10:41:38	1.286	101872.	-149.	45044.	-0.3	0.1011	260.

(CONTINUED)

F-4 AT 1.37M AT 44.4K MSL

(CONTINUED)

BOOM AT SITE 00 AT 1043 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:41:39	1.289	100679.	-85.	45038.	-0.3	0.0987	260.
10:41:40	1.292	99483.	-19.	45031.	-0.3	0.0613	260.
10:41:41	1.293	98285.	49.	45024.	-0.3	0.0139	260.
10:41:42	1.293	97087.	117.	45017.	-0.4	-0.0109	260.
10:41:43	1.293	95889.	187.	45009.	-0.3	-0.0035	260.
10:41:44	1.293	94691.	258.	45002.	-0.3	0.0240	260.
10:41:45	1.294	93493.	329.	44996.	-0.2	0.0440	260.
10:41:46	1.296	92293.	400.	44991.	-0.2	0.0502	260.
10:41:47	1.298	91091.	471.	44989.	-0.1	0.0671	260.
10:41:48	1.300	89888.	541.	44989.	0.0	0.0922	260.
10:41:49	1.304	88681.	612.	44991.	0.1	0.1027	260.
10:41:50	1.307	87471.	682.	44994.	0.2	0.0846	260.
10:41:51	1.309	86259.	753.	44999.	0.2	0.0280	260.
10:41:52	1.309	85046.	825.	45005.	0.3	-0.0320	260.
10:41:53	1.307	83833.	897.	45011.	0.3	-0.0447	260.
10:41:54	1.306	82622.	969.	45018.	0.3	-0.0010	260.
10:41:55	1.307	81411.	1043.	45025.	0.3	0.0567	260.
10:41:56	1.310	80199.	1116.	45032.	0.3	0.0775	260.
10:41:57	1.312	78984.	1189.	45038.	0.3	0.0535	260.
10:41:58	1.313	77767.	1262.	45043.	0.2	0.0265	260.
10:41:59	1.314	76549.	1334.	45048.	0.2	0.0334	260.
10:42:00	1.316	75330.	1408.	45052.	0.1	0.0670	260.
10:42:01	1.319	74109.	1481.	45053.	0.0	0.0858	260.
10:42:02	1.321	72836.	1555.	45050.	-0.2	0.0776	260.
10:42:03	1.324	71660.	1629.	45043.	-0.5	0.0602	260.
10:42:04	1.325	70432.	1703.	45030.	-0.8	0.0486	260.
10:42:05	1.327	69202.	1776.	45010.	-1.0	0.0516	260.
10:42:06	1.329	67971.	1850.	44984.	-1.3	0.0623	260.
10:42:07	1.331	66738.	1924.	44953.	-1.4	0.0751	260.
10:42:08	1.333	65503.	1999.	44921.	-1.5	0.0748	260.
10:42:09	1.336	64265.	2075.	44887.	-1.4	0.0643	260.
10:42:10	1.337	63026.	2153.	44856.	-1.3	0.0634	260.
10:42:11	1.339	61784.	2232.	44829.	-1.1	0.0549	261.
10:42:12	1.341	60541.	2313.	44808.	-0.8	0.0353	261.
10:42:13	1.342	59296.	2394.	44792.	-0.6	0.0232	261.
10:42:14	1.342	58051.	2477.	44782.	-0.4	0.0156	261.
10:42:15	1.343	56805.	2560.	44774.	-0.3	0.0068	261.
10:42:16	1.343	55559.	2644.	44767.	-0.3	0.0279	261.
10:42:17	1.345	54312.	2729.	44759.	-0.4	0.0745	261.
10:42:18	1.348	53063.	2814.	44750.	-0.5	0.1029	261.
10:42:19	1.351	51811.	2899.	44738.	-0.5	0.0814	261.

(CONTINUED)

F-4 AT 1.37M AT 44.4K MSL  
BOOM AT SITE 00 AT 1043 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:42:20	1.353	50556.	2983.	44726.	-0.6	0.0353	261.
10:42:21	1.354	49300.	3067.	44713.	-0.6	0.0201	261.
10:42:22	1.355	48043.	3151.	44699.	-0.6	0.0504	261.
10:42:23	1.357	46785.	3237.	44684.	-0.7	0.0957	261.
10:42:24	1.360	45523.	3323.	44668.	-0.8	0.0950	261.
10:42:25	1.363	44259.	3410.	44649.	-0.9	0.0623	261.
10:42:26	1.365	42993.	3500.	44629.	-0.9	0.0749	261.
10:42:27	1.368	41725.	3590.	44608.	-1.0	0.0968	261.
10:42:28	1.371	40453.	3681.	44585.	-1.0	0.0798	261.
10:42:29	1.372	39179.	3770.	44563.	-0.9	0.0036	261.
10:42:30	1.371	37905.	3860.	44542.	-0.9	-.0822	261.
10:42:31	1.367	36634.	3949.	44522.	-0.8	-.1320	261.
10:42:32	1.362	35366.	4038.	44505.	-0.7	-.1313	261.
10:42:33	1.358	34102.	4127.	44488.	-0.7	-.1008	261.
10:42:34	1.355	32842.	4217.	44473.	-0.7	-.0839	261.
10:42:35	1.352	31585.	4305.	44457.	-0.7	-.1068	261.
10:42:36	1.348	30331.	4393.	44441.	-0.7	-.1678	261.
10:42:37	1.341	29082.	4481.	44426.	-0.6	-.2320	261.
10:42:38	1.333	27841.	4570.	44412.	-0.5	-.2645	261.
10:42:39	1.324	26608.	4660.	44402.	-0.4	-.2712	261.
10:42:40	1.315	25384.	4751.	44394.	-0.3	-.2707	261.

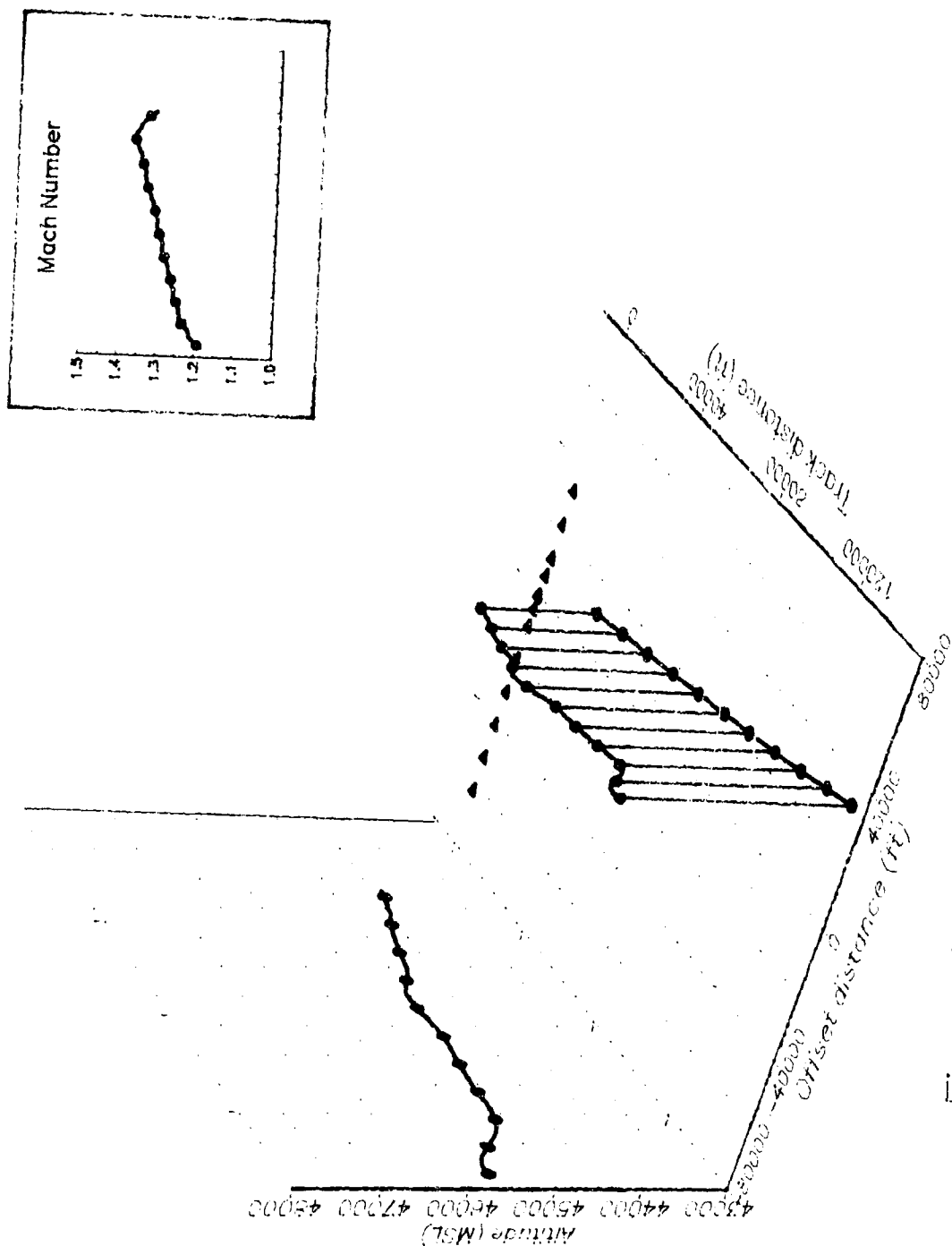


Figure B-5. F-4 on 3 Aug 87 at 1043

T-38 AT 1.0M AT 13.6K MSL  
BOOM AT SITE 00 AT 1005 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:03:24	0.977	148641.	-7858.	17590.	-17.5	0.3372	271.
10:03:25	0.983	147640.	-7615.	17279.	-16.7	0.3445	271.
10:03:26	0.989	146624.	-7375.	16980.	-15.9	0.3380	271.
10:03:27	0.997	145592.	-7135.	16693.	-15.0	0.3061	270.
10:03:28	1.004	144547.	-6897.	16420.	-14.2	0.2541	270.
10:03:29	1.010	143489.	-6659.	16160.	-13.3	0.2263	270.
10:03:30	1.017	142420.	-6421.	15915.	-12.4	0.2435	270.
10:03:31	1.024	141339.	-6184.	15685.	-11.4	0.2505	270.
10:03:32	1.031	140246.	-5948.	15473.	-10.5	0.2155	269.
10:03:33	1.037	139143.	-5713.	15277.	-9.5	0.1604	269.
10:03:34	1.041	138032.	-5479.	15097.	-8.7	0.1030	269.
10:03:35	1.043	135915.	-5246.	14932.	-8.0	0.0541	269.
10:03:36	1.043	135795.	-5013.	14777.	-7.6	0.0048	269.
10:03:37	1.042	134674.	-4779.	14628.	-7.5	-0.0129	269.
10:03:38	1.041	133553.	-4544.	14480.	-7.5	0.0301	269.
10:03:39	1.042	132431.	-4309.	14328.	-7.8	0.1123	269.
10:03:40	1.045	131307.	-4074.	14171.	-8.0	0.1715	269.
10:03:41	1.049	130178.	-3839.	14011.	-8.0	0.1554	269.
10:03:42	1.051	129043.	-3604.	13854.	-7.6	0.0926	269.
10:03:43	1.051	127904.	-3369.	13708.	-6.8	0.0322	269.
10:03:44	1.050	126762.	-3133.	13583.	-5.5	-0.0183	269.
10:03:45	1.048	125617.	-2896.	13486.	-4.0	-0.0678	269.
10:03:46	1.045	124473.	-2658.	13423.	-2.4	-0.1114	269.
10:03:47	1.041	123331.	-2422.	13391.	-0.9	-0.1343	269.
10:03:48	1.037	122192.	-2189.	13386.	0.3	-0.1196	269.
10:03:49	1.035	121056.	-1964.	13400.	1.1	-0.0624	268.
10:03:50	1.034	119920.	-1750.	13427.	1.5	0.0050	268.
10:03:51	1.035	118780.	-1551.	13458.	1.6	0.0225	267.
10:03:52	1.036	117638.	-1370.	13489.	1.5	-0.0261	266.
10:03:53	1.034	116493.	-1207.	13519.	1.5	-0.1028	265.
10:03:54	1.031	115348.	-1063.	13548.	1.5	-0.1592	264.
10:03:55	1.026	114206.	-939.	13577.	1.5	-0.1624	263.
10:03:56	1.023	113067.	-836.	13609.	1.7	-0.1251	262.
10:03:57	1.020	111930.	-756.	13643.	1.8	-0.0854	260.
10:03:58	1.019	110794.	-701.	13680.	2.0	-0.0586	259.
10:03:59	1.018	109660.	-671.	13720.	2.1	-0.0428	258.
10:04:00	1.018	108527.	-666.	13761.	2.1	-0.0368	256.
10:04:01	1.017	107395.	-684.	13803.	2.1	-0.0396	255.
10:04:02	1.017	106265.	-720.	13845.	2.1	-0.0446	254.
10:04:03	1.016	105138.	-771.	13884.	1.9	-0.0531	254.
10:04:04	1.015	104012.	-831.	13919.	1.7	-0.0583	253.

(CONTINUED)



T-38 AT 1.0M AT 13.6K MSL  
BOOM AT SITE 00 AT 1005 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:04:05	1.013	102889.	-898.	13950.	1.4	-.0520	253.
10:04:06	1.013	101767.	-968.	13975.	1.1	-.0334	253.
10:04:07	1.012	100646.	-1040.	13994.	0.9	-.0100	253.
10:04:08	1.012	99525.	-1111.	14009.	0.6	0.0071	253.
10:04:09	1.013	98404.	-1179.	14020.	0.5	0.0127	253.
10:04:10	1.013	97283.	-1243.	14029.	0.5	0.0047	253.
10:04:11	1.013	96160.	-1301.	14039.	0.6	-.0099	254.
10:04:12	1.012	95038.	-1351.	14051.	0.7	-.0192	254.
10:04:13	1.012	93916.	-1395.	14067.	0.9	-.0191	254.
10:04:14	1.011	92794.	-1433.	14087.	1.1	-.0166	255.
10:04:15	1.011	91673.	-1467.	14110.	1.2	-.0163	255.
10:04:16	1.011	90552.	-1499.	14132.	1.1	-.0165	255.
10:04:17	1.010	89432.	-1531.	14151.	0.8	-.013	255.
10:04:18	1.010	88312.	-1563.	14164.	0.5	-.0078	255.
10:04:19	1.010	87192.	-1596.	14169.	0.0	-.0018	255.
10:04:20	1.010	86072.	-1631.	14164.	-0.5	0.0045	255.
10:04:21	1.010	84952.	-1668.	14150.	-0.9	0.0116	255.
10:04:22	1.010	83832.	-1705.	14129.	-1.3	0.0179	255.
10:04:23	1.011	82712.	-1744.	14102.	-1.5	0.0215	255.
10:04:24	1.011	81591.	-1784.	14073.	-1.5	0.0208	255.
10:04:25	1.012	80469.	-1824.	14043.	-1.5	0.0189	254.
10:04:26	1.012	79347.	-1864.	14014.	-1.5	0.0188	254.
10:04:27	1.012	78224.	-1906.	13986.	-1.4	0.0177	254.
10:04:28	1.013	77101.	-1948.	13959.	-1.3	0.0142	254.
10:04:29	1.013	75977.	-1991.	13934.	-1.2	0.0085	254.
10:04:30	1.013	74853.	-2036.	13911.	-1.1	0.0024	254.
10:04:31	1.012	73729.	-2081.	13893.	-0.9	-.0016	254.
10:04:32	1.012	72605.	-2128.	13878.	-0.7	-.0020	254.
10:04:33	1.012	71481.	-2175.	13867.	-0.5	-.0003	254.
10:04:34	1.012	70357.	-2223.	13857.	-0.5	0.0017	254.
10:04:35	1.012	69233.	-2273.	13848.	-0.5	0.0033	254.
10:04:36	1.012	68109.	-2323.	13837.	-0.6	0.0013	254.
10:04:37	1.012	66985.	-2375.	13825.	-0.7	-.0043	254.
10:04:38	1.011	65861.	-2428.	13811.	-0.7	-.0106	254.
10:04:39	1.011	64738.	-2482.	13799.	-0.6	-.0137	254.
10:04:40	1.010	63615.	-2538.	13789.	-0.4	-.0134	254.
10:04:41	1.010	62492.	-2595.	13784.	-0.2	-.0142	254.
10:04:42	1.010	61371.	-2653.	13784.	0.1	-.0196	253.
10:04:43	1.009	60250.	-2713.	13789.	0.4	-.0281	253.
10:04:44	1.008	59130.	-2775.	13800.	0.6	-.0328	253.
10:04:45	1.007	58011.	-2837.	13813.	0.7	-.0308	253.

(CONTINUED)

T-38 AT 1.0M AT 13.6K MSL  
BOOM AT SITE 00 AT 1005 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:04:46	1.007	56893.	-2899.	13828.	0.7	-.0251	253.
10:04:47	1.006	55776.	-2963.	13840.	0.5	-.0180	253.
10:04:48	1.006	54659.	-3026.	13848.	0.3	-.0099	253.
10:04:49	1.006	53543.	-3090.	13850.	-0.1	-.0044	253.
10:04:50	1.006	52427.	-3155.	13846.	-0.3	-.0018	253.
10:04:51	1.005	51311.	-3222.	13837.	-0.5	-.0038	253.
10:04:52	1.005	50196.	-3289.	13825.	-0.6	-.0073	253.
10:04:53	1.005	49081.	-3357.	13813.	-0.6	-.0063	253.
10:04:54	1.005	47966.	-3426.	13802.	-0.5	-.0023	253.
10:04:56	1.004	46182.	-3539.	13789.	-0.3	-.0081	253.
10:04:57	1.004	45067.	-3610.	13785.	-0.2	-.0105	253.
10:04:58	1.004	43953.	-3682.	13782.	-0.1	-.0077	253.
10:04:59	1.003	42839.	-3755.	13780.	-0.1	-.0032	253.
10:04:60	1.003	41726.	-3828.	13777.	-0.2	-.0002	253.
10:05:01	1.003	40612.	-3902.	13771.	-0.4	0.0027	253.
10:05:02	1.003	39499.	-3976.	13762.	-0.6	0.0069	253.
10:05:03	1.004	38385.	-4050.	13748.	-0.8	0.0118	253.
10:05:04	1.004	37271.	-4124.	13729.	-1.0	0.0133	253.
10:05:05	1.004	36156.	-4197.	13708.	-1.2	0.0097	253.
10:05:06	1.004	35041.	-4269.	13685.	-1.1	0.0025	253.
10:05:07	1.004	33926.	-4340.	13665.	-0.9	-.0041	253.
10:05:08	1.003	32811.	-4410.	13650.	-0.6	-.0081	253.
10:05:09	1.003	31696.	-4479.	13641.	-0.3	-.0075	253.
10:05:10	1.003	30581.	-4548.	13639.	0.0	-.0046	253.
10:05:11	1.003	29466.	-4615.	13641.	0.2	-.0031	253.
10:05:12	1.003	28351.	-4682.	13644.	0.2	-.0046	253.
10:05:13	1.002	27237.	-4750.	13647.	0.1	-.0070	253.
10:05:14	1.002	26122.	-4817.	13648.	-0.1	-.0110	253.
10:05:15	1.002	25008.	-4885.	13645.	-0.3	-.0162	253.
10:05:16	1.001	23895.	-4954.	13638.	-0.4	-.0170	253.
10:05:17	1.001	22782.	-5023.	13628.	-0.5	-.0106	253.
10:05:18	1.000	21670.	-5092.	13617.	-0.5	-.0013	253.
10:05:19	1.000	20557.	-5161.	13608.	-0.4	0.0039	253.
10:05:20	1.000	19445.	-5230.	13601.	-0.2	0.0025	253.
10:05:21	1.000	18332.	-5300.	13598.	0.0	-.0015	253.
10:05:22	1.000	17219.	-5370.	13599.	0.1	-.0068	253.
10:05:23	1.000	16107.	-5440.	13602.	0.2	-.0135	253.
10:05:24	0.999	14995.	-5510.	13606.	0.2	-.0181	253.
10:05:25	0.999	13884.	-5581.	13610.	0.2	-.0176	253.
10:05:26	0.999	12774.	-5653.	13612.	0.1	-.0109	253.
10:05:27	0.998	11663.	-5724.	13613.	0.0	0.0006	253.

(CONTINUED)

T-38 AT 1.0M AT 13.6K MSL  
BOOM AT SITE 00 AT 1005 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
10:05:28	0.999	10553.	-5796.	13612.	-0.1	0.0074 253.
10:05:29	0.999	9442.	-5868.	13610.	-0.2	0.0038 253.
10:05:30	0.999	8332.	-5939.	13606.	-0.2	-.0029 253.
10:05:31	0.998	7221.	-6009.	13602.	-0.3	-.0057 253.
10:05:32	0.998	6111.	-6078.	13596.	-0.3	-.0040 253.
10:05:33	0.998	5000.	-6147.	13590.	-0.3	0.0016 253.
10:05:34	0.998	3890.	-6216.	13584.	-0.3	0.0092 253.
10:05:35	0.998	2779.	-6285.	13577.	-0.3	0.0091 253.
10:05:36	0.999	1668.	-6355.	13571.	-0.3	-.0076 253.
10:05:37	0.998	557.	-6425.	13565.	-0.3	-.0463 253.

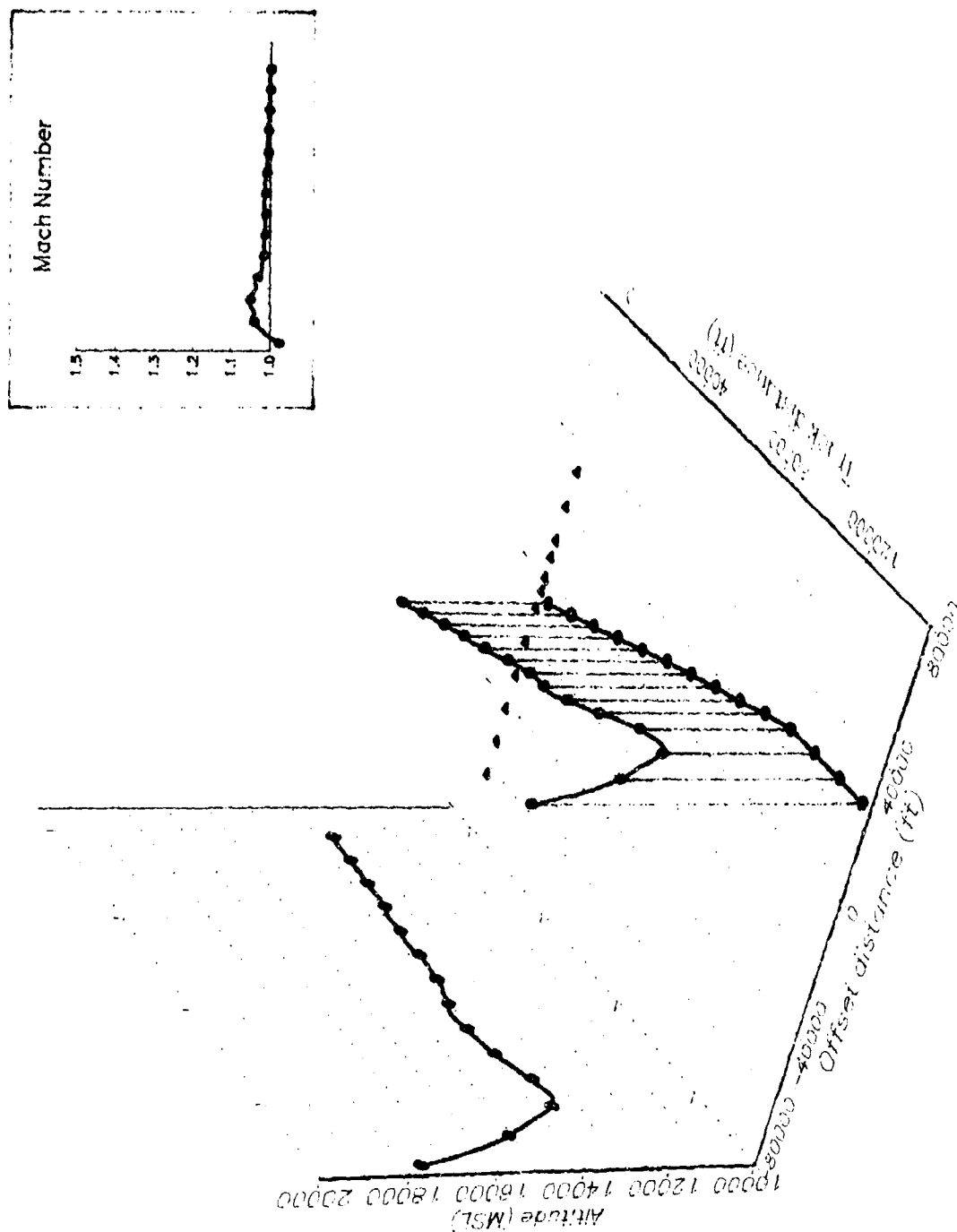


Figure B-6. T-38 on 3 Aug 87 at 1005

T-38 AT 1.1M AT 13K MSL  
ROOM AT SITE 00 AT 1012 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:09:41	0.760	128512.	-26677.	20974.	-0.9	-.0011	14.
10:09:42	0.760	128891.	-25978.	20962.	-0.8	-.0018	14.
10:09:43	0.760	129269.	-25279.	20952.	-0.6	-.0067	14.
10:09:44	0.760	129645.	-24578.	20944.	-0.5	-.0110	14.
10:09:45	0.760	130019.	-23877.	20938.	-0.3	-.0109	14.
10:09:46	0.759	130390.	-23175.	20935.	-0.1	-.0206	14.
10:09:47	0.758	130759.	-22473.	20936.	0.2	-.0348	13.
10:09:48	0.757	131125.	-21770.	20940.	0.4	-.0386	13.
10:09:49	0.756	131408.	-21067.	20948.	0.7	-.0301	13.
10:09:50	0.755	131850.	-20365.	20959.	0.9	-.0220	13.
10:09:51	0.755	132213.	-19664.	20974.	1.1	0.0046	13.
10:09:52	0.756	132579.	-18964.	20990.	1.2	0.0485	13.
10:09:53	0.758	132948.	-18265.	21008.	1.2	0.0722	14.
10:09:54	0.760	133322.	-17565.	21024.	1.1	0.0564	14.
10:09:55	0.761	133695.	-16863.	21039.	0.9	0.0143	13.
10:09:56	0.761	134059.	-16156.	21048.	0.4	-.0445	12.
10:09:57	0.759	134402.	-15441.	21050.	-0.3	-.0837	10.
10:09:58	0.757	134713.	-14715.	21040.	-1.1	-.0777	8.
10:09:59	0.755	134979.	-13976.	21017.	-2.1	-.0467	4.
10:10:00	0.754	135193.	-13224.	20981.	-3.0	-.0234	360.
10:10:01	0.754	135345.	-12459.	20932.	-3.8	-.0162	355.
10:10:02	0.754	135429.	-11685.	20874.	-4.3	-.0096	350.
10:10:03	0.755	135437.	-10907.	20812.	-4.5	0.0075	345.
10:10:04	0.757	135365.	-10131.	20748.	-4.4	0.0307	339.
10:10:05	0.759	135212.	-9364.	20688.	-4.0	0.0412	333.
10:10:06	0.761	134977.	-8614.	20634.	3.5	0.0125	328.
10:10:07	0.761	134664.	-7809.	20588.	-2.9	-.0652	322.
10:10:08	0.759	134276.	-7197.	20552.	-2.2	-.1715	316.
10:10:09	0.754	133819.	-6551.	20527.	-1.3	-.2753	310.
10:10:10	0.746	133294.	-5962.	20514.	-0.5	-.3427	303.
10:10:11	0.738	132709.	-5443.	20512.	0.2	-.3432	296.
10:10:12	0.731	132068.	-5003.	20519.	0.7	-.2643	289.
10:10:13	0.727	131380.	-4649.	20530.	0.9	-.1295	281.
10:10:14	0.727	130654.	-4382.	20542.	0.6	-.0045	274.
10:10:15	0.729	129902.	-4195.	20545.	-0.2	0.0429	269.
10:10:16	0.731	129134.	-4072.	20535.	-1.5	-.0034	264.
10:10:17	0.730	128360.	-3994.	20503.	-3.3	-.0644	262.
10:10:18	0.728	127587.	-3938.	20444.	-5.4	-.0409	261.
10:10:19	0.729	126818.	-3888.	20356.	-7.5	0.0929	261.
10:10:20	0.733	126049.	-3833.	20239.	-9.5	0.2809	261.
10:10:21	0.744	125277.	-3769.	20095.	-11.2	0.4445	262.

(CONTINUED)

T-38 AT 1.1M AT 13K MSL  
BOOM AT SITE 00 AT 1012 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:10:22	0.757	124496.	-3696.	19928.	-12.7	0.5388	262.
10:10:23	0.773	123702.	-3620.	19738.	-14.0	0.5689	262.
10:10:24	0.789	122895.	-3542.	19528.	-15.1	0.5726	262.
10:10:25	0.804	122074.	-3467.	19297.	-16.1	0.5889	262.
10:10:26	0.821	121239.	-3395.	19047.	-17.0	0.6215	262.
10:10:27	0.837	120387.	-3327.	18781.	-17.6	0.6462	261.
10:10:28	0.854	119517.	-3262.	18501.	-18.0	0.6630	261.
10:10:29	0.871	118628.	-3200.	18212.	-18.2	0.6690	261.
10:10:30	0.888	117719.	-3139.	17916.	-18.2	0.6592	261.
10:10:31	0.903	116788.	-3079.	17615.	-18.1	0.6461	260.
10:10:32	0.918	115838.	-3019.	17310.	-18.0	0.6364	260.
10:10:33	0.932	114867.	-2961.	17001.	-17.9	0.6244	260.
10:10:34	0.950	113876.	-2904.	16688.	-17.8	0.5955	260.
10:10:35	0.965	112866.	-2850.	16372.	-17.5	0.5404	260.
10:10:36	0.979	111838.	-2799.	16056.	-17.2	0.4652	260.
10:10:37	0.992	110793.	-2752.	15743.	-16.6	0.3895	259.
10:10:38	1.003	109732.	-2707.	15439.	-15.8	0.3308	259.
10:10:39	1.013	108657.	-2666.	15148.	-14.7	0.2942	259.
10:10:40	1.021	107566.	-2626.	14878.	-13.3	0.2755	259.
10:10:41	1.026	106460.	-2589.	14637.	-11.6	0.2402	259.
10:10:42	1.031	105339.	-2553.	14429.	-9.6	0.1642	259.
10:10:43	1.033	104207.	-2519.	14261.	-7.5	0.0667	258.
10:10:44	1.033	103067.	-2486.	14134.	-5.4	-0.0179	258.
10:10:45	1.031	101923.	-2457.	14048.	-3.4	-0.0671	258.
10:10:46	1.029	100780.	-2434.	13998.	-1.7	-0.0770	258.
10:10:47	1.027	99638.	-2422.	13978.	-0.4	-0.0542	257.
10:10:48	1.026	98497.	-2427.	13979.	0.4	-0.0176	256.
10:10:49	1.026	97358.	-2452.	13993.	0.9	0.0033	255.
10:10:50	1.027	96220.	-2500.	14012.	1.0	0.0005	254.
10:10:51	1.027	95083.	-2569.	14029.	0.7	-0.0196	252.
10:10:52	1.026	93948.	-2656.	14040.	0.3	-0.0368	252.
10:10:53	1.025	92816.	-2755.	14040.	-0.3	-0.0383	251.
10:10:54	1.024	91685.	-2862.	14027.	-1.0	-0.0209	251.
10:10:55	1.024	90556.	-2972.	14002.	-1.6	0.0052	251.
10:10:56	1.024	89426.	-3084.	13966.	-2.0	0.0240	251.
10:10:57	1.024	88297.	-3195.	13922.	-2.4	0.0305	251.
10:10:58	1.025	87166.	-3307.	13874.	-2.5	0.0296	251.
10:10:59	1.025	86035.	-3419.	13823.	-2.5	0.0272	251.
10:11:00	1.025	84903.	-3531.	13774.	-2.4	0.0261	251.
10:11:01	1.026	83770.	-3646.	13729.	-2.2	0.0216	251.
10:11:02	1.026	82637.	-3763.	13688.	-2.0	0.0084	250.

(CONTINUED)

T-38 AT 1.1M AT 13K MSL  
BOOM AT SITE 00 AT 1012 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:11:03	1.025	81503.	-3883.	13652.	-1.7	-.0090	250.
10:11:04	1.025	80370.	-4006.	13619.	-1.5	-.0217	250.
10:11:05	1.023	79238.	-4132.	13591.	-1.4	-.0271	250.
10:11:06	1.023	78108.	-4261.	13565.	-1.2	-.0244	250.
10:11:07	1.022	76978.	-4393.	13542.	-1.1	-.0179	250.
10:11:08	1.021	75849.	-4527.	13521.	-1.1	-.0120	249.
10:11:09	1.020	74721.	-4663.	13501.	-1.0	-.0100	249.
10:11:10	1.020	73593.	-4800.	13481.	-1.0	-.0146	249.
10:11:11	1.019	72466.	-4939.	13462.	-1.0	-.0225	249.
10:11:12	1.018	71340.	-5079.	13442.	-1.0	-.0271	249.
10:11:13	1.017	70215.	-5221.	13423.	-1.0	-.0239	249.
10:11:14	1.017	69092.	-5365.	13404.	-0.9	-.0135	249.
10:11:15	1.016	67968.	-5510.	13387.	-0.8	-.0041	249.
10:11:16	1.016	66845.	-5657.	13373.	-0.6	-.0081	249.
10:11:17	1.015	65723.	-5805.	13362.	-0.5	-.0233	249.
10:11:18	1.015	64602.	-5955.	13354.	-0.3	-.0395	249.
10:11:19	1.013	63482.	-6107.	13348.	-0.3	-.0486	249.
10:11:20	1.012	62363.	-6259.	13344.	-0.2	-.0485	248.
10:11:21	1.010	61247.	-6412.	13340.	-0.2	-.0406	248.
10:11:22	1.009	60132.	-6567.	13336.	-0.3	-.0265	248.
10:11:23	1.009	59018.	-6722.	13330.	-0.4	-.0125	248.
10:11:24	1.008	57905.	-6879.	13321.	-0.5	-.0058	248.
10:11:25	1.008	56792.	-7037.	13309.	-0.7	-.0052	248.
10:11:26	1.008	55679.	-7195.	13293.	-0.9	-.0062	248.
10:11:27	1.007	54566.	-7353.	13273.	-1.2	-.0046	248.
10:11:28	1.007	53454.	-7511.	13249.	-1.3	0.0003	248.
10:11:29	1.007	52341.	-7667.	13221.	-1.5	0.0068	248.
10:11:30	1.007	51229.	-7821.	13191.	-1.6	0.0117	248.
10:11:31	1.007	50115.	-7973.	13161.	-1.5	0.0096	249.
10:11:32	1.007	49001.	-8123.	13132.	-1.4	-.0010	249.
10:11:33	1.006	47886.	-8271.	13108.	-1.1	-.0173	249.
10:11:34	1.005	46771.	-8415.	13091.	-0.7	-.0275	249.
10:11:35	1.004	45657.	-8557.	13082.	-0.3	-.0280	249.
10:11:36	1.003	44543.	-8696.	13078.	-0.1	-.0250	249.
10:11:37	1.003	43429.	-8832.	13078.	0.0	-.0240	249.
10:11:38	1.002	42316.	-8967.	13077.	-0.1	-.0265	249.
10:11:39	1.001	41204.	-9101.	13073.	-0.3	-.0247	249.
10:11:40	1.000	40092.	-9235.	13064.	-0.6	-.0130	249.
10:11:41	1.000	38982.	-9369.	13051.	-0.8	0.0016	249.
10:11:42	1.000	37871.	-9504.	13035.	-0.8	0.0081	249.
10:11:43	1.000	36760.	-9639.	13019.	-0.8	0.0011	249.

(CONTINUED)

T-38 AT 1.1M AT 13K MSL  
BOOM AT SITE 00 AT 1012 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:11:44	1.000	35649.	-9774.	13003.	-0.8	-.0186	249.
10:11:45	0.999	34538.	-9909.	12990.	-0.6	-.0336	249.
10:11:46	0.998	33428.	-10043.	12978.	-0.5	-.0337	249.
10:11:47	0.997	32320.	-10176.	12969.	-0.4	-.0260	249.
10:11:48	0.996	31212.	-10310.	12963.	-0.3	-.0148	249.
10:11:49	0.996	30104.	-10443.	12958.	-0.2	-.0061	249.
10:11:50	0.996	28997.	-10575.	12954.	-0.2	-.0023	249.
10:11:51	0.996	27890.	-10707.	12950.	-0.2	0.0016	250.
10:11:52	0.996	26782.	-10839.	12946.	-0.2	0.0065	250.
10:11:53	0.996	25675.	-10970.	12941.	-0.3	0.0060	250.
10:11:54	0.996	24567.	-11100.	12934.	-0.4	-.0029	250.
10:11:55	0.996	23459.	-11230.	12926.	-0.5	-.0116	250.
10:11:56	0.996	22351.	-11359.	12915.	-0.6	-.0151	250.
10:11:57	0.995	21244.	-11488.	12902.	-0.7	-.0153	250.
10:11:58	0.995	20138.	-11616.	12889.	-0.7	-.0143	250.
10:11:59	0.994	19031.	-11744.	12875.	-0.8	-.0109	250.
10:12:00	0.994	17925.	-11871.	12860.	-0.7	-.0032	250.
10:12:01	0.994	16819.	-11999.	12846.	-0.7	0.0021	250.
10:12:02	0.994	15713.	-12126.	12834.	-0.6	-.0006	250.
10:12:03	0.994	14607.	-12253.	12824.	-0.5	-.0088	250.
10:12:04	0.994	13501.	-12380.	12816.	-0.4	-.0141	250.
10:12:05	0.993	12396.	-12506.	12810.	-0.3	-.0151	250.
10:12:06	0.993	11291.	-12631.	12805.	-0.2	-.0139	250.
10:12:07	0.992	10186.	-12756.	12801.	-0.2	-.0132	250.
10:12:08	0.992	9082.	-12881.	12797.	-0.2	-.0128	250.
10:12:09	0.992	7978.	-13005.	12792.	-0.3	-.0107	250.
10:12:10	0.991	6874.	-13128.	12786.	-0.4	-.0058	250.
10:12:11	0.991	5771.	-13251.	12777.	-0.5	0.0022	250.
10:12:12	0.992	4667.	-13374.	12766.	-0.6	0.0137	250.
10:12:13	0.992	3563.	-13496.	12753.	-0.7	0.0246	250.
10:12:14	0.993	2458.	-13617.	12740.	-0.7	0.0254	250.
10:12:15	0.993	1352.	-13739.	12727.	-0.6	0.0107	250.
10:12:16	0.993	246.	-13860.	12716.	-0.5	-.0204	250.
10:12:17	0.992	-860.	-13981.	12708.	-0.4	-.0586	250.
10:12:18	0.990	-1963.	-14102.	12703.	-0.2	-.0877	250.
10:12:19	0.987	-3065.	-14221.	12702.	0.1	-.0991	250.
10:12:20	0.984	-4163.	-14339.	12705.	0.3	-.0997	250.



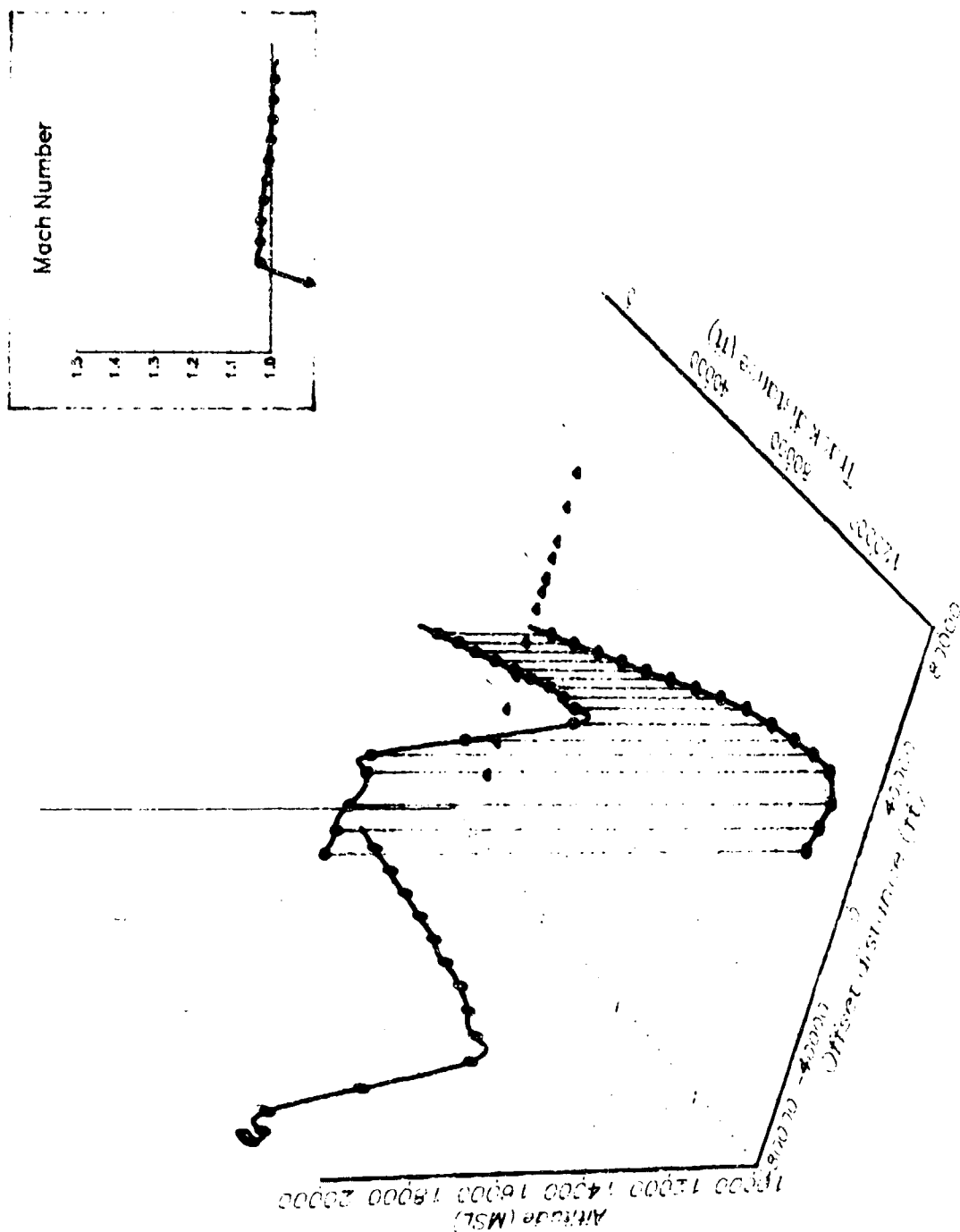


Figure B-7. T-35 on 3 Aug 87 at 1012

T-38 AT 10000 AT 29.6K MSL  
BOOM AT 10000 AT 1228 ON 03 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:26:03	1.109	147254.	2476.	29674.	0.6	0.0132	249.
12:26:04	1.110	146130.	2327.	29682.	0.3	0.0144	249.
12:26:05	1.110	145006.	2176.	29685.	0.0	0.0190	249.
12:26:06	1.111	143881.	2025.	29683.	-0.2	0.0302	249.
12:26:07	1.112	142756.	1874.	29675.	-0.5	0.0464	249.
12:26:08	1.113	141629.	1721.	29664.	-0.6	0.0551	249.
12:26:09	1.115	140501.	1567.	29650.	-0.7	0.0422	248.
12:26:10	1.116	139371.	1413.	29635.	-0.7	0.0095	248.
12:26:11	1.115	138241.	1258.	29622.	-0.5	-0.0255	248.
12:26:12	1.114	137112.	1103.	29614.	-0.3	-0.0412	248.
12:26:13	1.113	135984.	948.	29612.	0.1	-0.0276	248.
12:26:14	1.113	134857.	794.	29616.	0.4	-0.0011	248.
12:26:15	1.113	133730.	641.	29626.	0.6	0.0131	249.
12:26:16	1.113	132603.	488.	29641.	0.8	0.0091	249.
12:26:17	1.114	131475.	335.	29657.	0.8	-0.0050	249.
12:26:18	1.113	130348.	182.	29674.	0.8	-0.0151	249.
12:26:19	1.113	129221.	30.	29689.	0.7	-0.0129	249.
12:26:20	1.113	128094.	-124.	29702.	0.6	-0.0004	249.
12:26:21	1.113	126968.	-277.	29712.	0.4	0.0128	248.
12:26:22	1.113	125841.	-431.	29719.	0.3	0.0169	248.
12:26:23	1.114	124713.	-586.	29723.	0.1	0.0101	248.
12:26:24	1.114	123585.	-740.	29724.	0.0	-0.0032	248.
12:26:25	1.114	122458.	-894.	29722.	-0.2	-0.0150	248.
12:26:26	1.113	121330.	-1048.	29717.	-0.3	-0.0155	249.
12:26:27	1.113	120203.	-1201.	29710.	-0.4	-0.0053	249.
12:26:28	1.113	119076.	-1352.	29699.	-0.5	0.0090	249.
12:26:29	1.113	117948.	-1500.	29688.	-0.6	0.0237	249.
12:26:30	1.114	116819.	-1643.	29677.	-0.5	0.0318	249.
12:26:31	1.115	115688.	-1780.	29667.	-0.4	0.0262	250.
12:26:32	1.116	114554.	-1909.	29661.	-0.2	0.0146	250.
12:26:33	1.116	113420.	-2029.	29660.	0.0	0.0052	251.
12:26:34	1.116	112284.	-2140.	29662.	0.2	-0.0058	251.
12:26:35	1.115	111147.	-2241.	29669.	0.5	-0.0249	252.
12:26:36	1.115	110010.	-2331.	29681.	0.7	-0.0349	252.
12:26:37	1.114	108873.	-2409.	29697.	0.9	-0.0269	253.
12:26:38	1.113	107736.	-2476.	29718.	1.2	-0.0233	253.
12:26:39	1.112	106599.	-2531.	29744.	1.4	-0.0281	254.
12:26:40	1.111	105462.	-2574.	29774.	1.6	-0.0326	255.
12:26:41	1.111	104327.	-2608.	29807.	1.7	-0.0276	255.
12:26:42	1.110	103191.	-2635.	29842.	1.7	-0.0184	255.
12:26:43	1.110	102057.	-2656.	29875.	1.6	-0.0153	256.

(CONTINUED)

T-38 AT 1.11M AT 29.6K MSL  
BOOM AT SITE 00 AT 1228 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:26:44	1.109	100922	-2673.	29905.	1.4	-.0147	256.
12:26:45	1.109	99788.	-2689.	29932.	1.2	-.0088	256.
12:26:46	1.109	98654.	-2705.	29954.	1.0	-.0003	256.
12:26:47	1.109	97520.	-2720.	29972.	0.8	0.0026	256.
12:26:48	1.109	96386.	-2736.	29984.	0.5	-.0039	256.
12:26:49	1.109	95252.	-2752.	29992.	0.3	-.0124	256.
12:26:50	1.108	94118.	-2767.	29995.	0.0	-.0139	256.
12:26:51	1.108	92985.	-2782.	29992.	-0.2	-.0054	256.
12:26:52	1.108	91852.	-2796.	29986.	-0.4	0.0089	256.
12:26:53	1.109	90718.	-2810.	29977.	-0.5	0.0223	256.
12:26:54	1.109	89584.	-2824.	29966.	-0.6	0.0323	256.
12:26:55	1.110	88449.	-2837.	29955.	-0.5	0.0349	256.
12:26:56	1.111	87312.	-2850.	29945.	-0.5	0.0291	256.
12:26:57	1.112	86175.	-2861.	29935.	-0.4	0.0193	256.
12:26:58	1.112	85037.	-2872.	29927.	-0.4	0.0079	256.
12:26:59	1.112	83899.	-2882.	29919.	-0.4	-.0029	256.
12:27:00	1.112	82761.	-2892.	29912.	-0.4	-.0039	256.
12:27:01	1.112	81623.	-2900.	29904.	-0.4	0.0039	256.
12:27:02	1.112	80485.	-2909.	29896.	-0.4	0.0109	256.
12:27:03	1.113	79346.	-2917.	29888.	-0.4	0.0132	256.
12:27:04	1.113	78207.	-2926.	29880.	-0.4	0.0079	256.
12:27:05	1.113	77068.	-2936.	29873.	-0.4	-.0028	256.
12:27:06	1.113	75929.	-2945.	29866.	-0.3	-.0113	256.
12:27:07	1.113	74790.	-2954.	29859.	-0.3	-.0094	256.
12:27:08	1.112	73652.	-2962.	29853.	-0.3	0.0045	256.
12:27:09	1.113	72513.	-2969.	29848.	-0.2	0.0172	256.
12:27:10	1.113	71374.	-2975.	29844.	-0.2	0.0224	256.
12:27:11	1.114	70234.	-2981.	29842.	-0.1	0.0210	256.
12:27:12	1.115	69094.	-2986.	29839.	-0.1	0.0165	256.
12:27:13	1.115	67953.	-2992.	29837.	-0.1	0.0087	256.
12:27:14	1.115	66811.	-2997.	29836.	0.0	0.0043	256.
12:27:15	1.115	65670.	-3003.	29835.	0.0	0.0073	256.
12:27:16	1.116	64528.	-3008.	29835.	0.0	0.0103	256.
12:27:17	1.116	63386.	-3014.	29836.	0.0	0.0074	256.
12:27:18	1.116	62244.	-3019.	29837.	0.0	-.0016	256.
12:27:19	1.116	61102.	-3024.	29838.	0.0	-.0113	256.
12:27:20	1.115	59960.	-3028.	29837.	-0.1	-.0141	256.
12:27:21	1.115	58818.	-3032.	29835.	-0.1	-.0049	256.
12:27:22	1.115	57677.	-3036.	29832.	-0.2	0.0105	256.
12:27:23	1.116	56535.	-3039.	29827.	-0.3	0.0229	257.
12:27:24	1.117	55393.	-3041.	29820.	-0.4	0.0277	257.

(CONTINUED)

T-38 AT 1.11M AT 29.6K MSL  
BOOM AT SITE 00 AT 1228 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:27:25	1.117	54250.	-3042.	29812.	-0.4	0.0221	257.
12:27:26	1.118	53106.	-3042.	29803.	-0.5	0.0105	257.
12:27:27	1.118	51961.	-3042.	29793.	-0.5	0.0003	257.
12:27:28	1.118	50817.	-3041.	29783.	-0.5	-.0033	257.
12:27:29	1.118	49673.	-3040.	29772.	-0.5	-.0004	257.
12:27:30	1.118	48529.	-3038.	29762.	-0.5	0.0027	257.
12:27:31	1.118	47384.	-3036.	29751.	-0.5	0.0004	257.
12:27:32	1.117	46240.	-3033.	29740.	-0.5	-.0090	257.
12:27:33	1.117	45096.	-3030.	29729.	-0.5	-.0229	257.
12:27:34	1.116	43953.	-3026.	29719.	-0.5	-.0320	257.
12:27:35	1.115	42810.	-3021.	29709.	-0.4	-.0308	257.
12:27:36	1.114	41669.	-3017.	29702.	-0.3	-.0187	257.
12:27:37	1.114	40528.	-3012.	29696.	-0.2	-.0047	257.
12:27:38	1.114	39388.	-3008.	29693.	-0.1	-.0004	257.
12:27:39	1.114	38247.	-3003.	29692.	0.0	-.0093	257.
12:27:40	1.113	37107.	-2999.	29693.	0.1	-.0270	257.
12:27:41	1.112	35968.	-2994.	29694.	0.1	-.0424	257.
12:27:42	1.111	34830.	-2988.	29696.	0.1	-.0465	257.
12:27:43	1.109	33693.	-2983.	29697.	0.0	-.0363	257.
12:27:44	1.108	32558.	-2976.	29695.	-0.2	-.0193	257.
12:27:45	1.108	31423.	-2970.	29690.	-0.3	-.0088	257.
12:27:46	1.108	30288.	-2963.	29682.	-0.4	-.0097	257.
12:27:47	1.107	29154.	-2956.	29673.	-0.5	-.0148	257.
12:27:48	1.107	28020.	-2949.	29661.	-0.6	-.0134	257.
12:27:49	1.106	26887.	-2942.	29649.	-0.6	-.0040	257.
12:27:50	1.107	25754.	-2937.	29636.	-0.6	0.0099	257.
12:27:51	1.107	24621.	-2933.	29624.	-0.6	0.0206	257.
12:27:52	1.107	23487.	-2929.	29611.	-0.6	0.0195	257.
12:27:53	1.108	22352.	-2925.	29600.	-0.5	0.0082	257.
12:27:54	1.108	21217.	-2921.	29590.	-0.5	-.0036	257.
12:27:55	1.108	20082.	-2915.	29581.	-0.4	-.0108	257.
12:27:56	1.107	18948.	-2909.	29575.	-0.2	-.0134	257.
12:27:57	1.107	17814.	-2902.	29572.	-0.1	-.0137	257.
12:27:58	1.106	16680.	-2894.	29571.	0.0	-.0138	257.
12:27:59	1.106	15547.	-2885.	29573.	0.1	-.0097	257.
12:28:00	1.106	14414.	-2876.	29575.	0.1	-.0031	257.
12:28:01	1.106	13281.	-2867.	29577.	0.1	-.0008	257.
12:28:02	1.106	12148.	-2857.	29580.	0.1	-.0025	257.
12:28:03	1.106	11015.	-2846.	29582.	0.1	-.0022	257.
12:28:04	1.106	9883.	-2836.	29583.	0.0	0.0012	257.
12:28:05	1.106	8750.	-2824.	29584.	0.0	0.0039	257.

(CONTINUED)

T-38 AT 1.11M AT 29.6K MSL  
BOOM AT SITE 00 AT 1228 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
12:28:06	1.106	7617.	-2812.	29584.	0.0	0.0031 257.
12:28:07	1.106	6484.	-2800.	29584.	0.0	0.0010 257.
12:28:08	1.106	5351.	-2787.	29584.	0.0	0.0018 257.
12:28:09	1.106	4218.	-2773.	29583.	0.0	0.0037 257.
12:28:10	1.106	3085.	-2758.	29583.	0.0	0.0042 257.

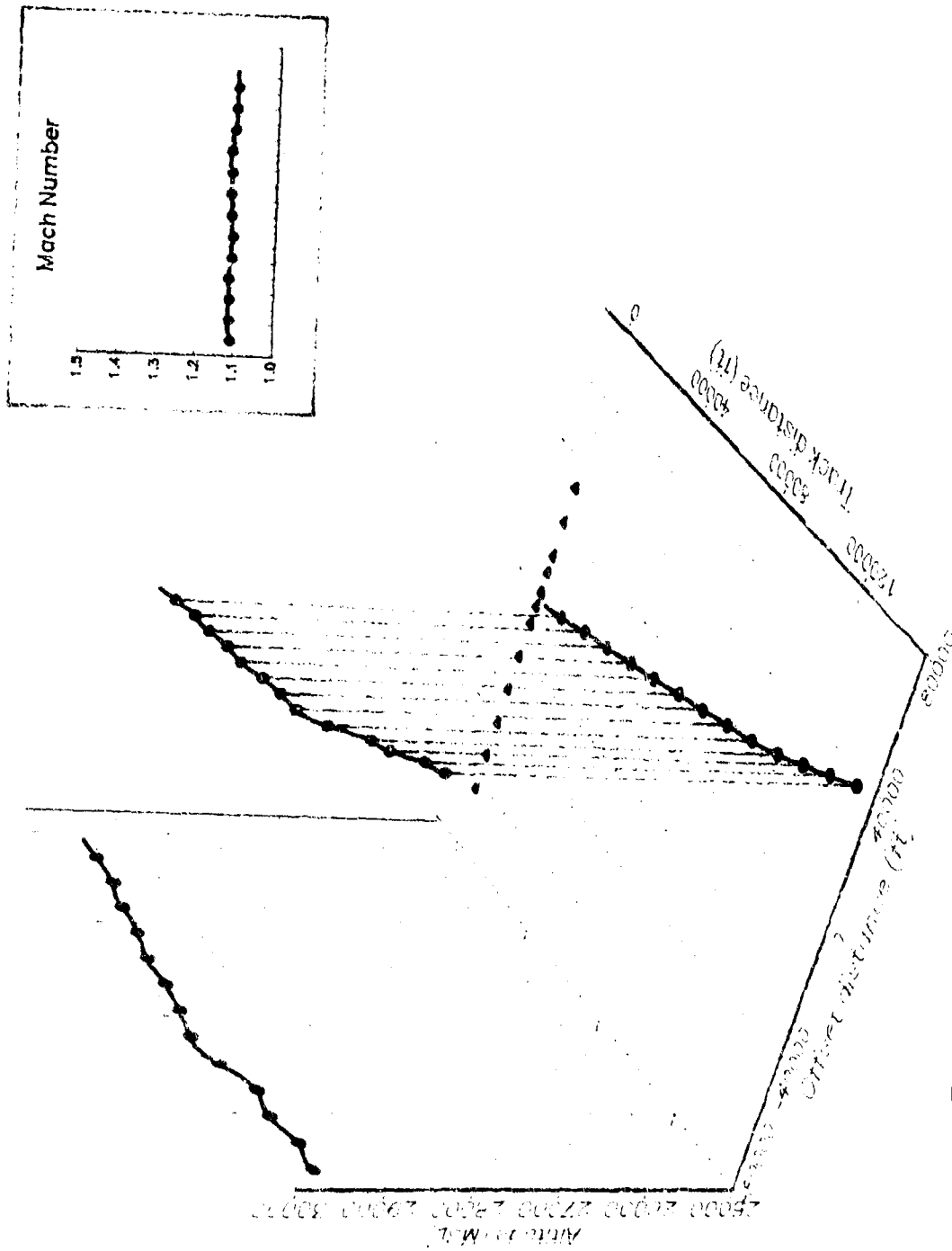


Figure B-8 T-38 on 3 Aug 87 at 1228

T-38 AT 1.05M AT 21.2K MSL  
BOOM AT SITE 00 AT 1238 ON 03 AUG 67

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:36:05	1.169	149240.	-11245.	21162.	0.4	-.1253	271.
12:36:06	1.166	148030.	-10955.	21172.	0.4	-.1254	271.
12:36:07	1.162	146824.	-10665.	21182.	0.5	-.1242	271.
12:36:08	1.158	145621.	-10376.	21191.	0.4	-.1132	271.
12:36:09	1.155	144423.	-10087.	21200.	0.3	-.0955	271.
12:36:10	1.153	143227.	-9799.	21206.	0.1	-.0855	271.
12:36:11	1.150	142034.	-9511.	21205.	-0.2	-.0824	271.
12:36:12	1.148	140844.	-9226.	21196.	-0.7	-.0760	271.
12:36:13	1.145	139655.	-8942.	21177.	-1.2	-.0667	271.
12:36:14	1.144	138468.	-8662.	21147.	-1.5	-.0540	271.
12:36:15	1.142	137282.	-8383.	21111.	-1.7	-.0395	271.
12:36:16	1.141	136097.	-8106.	21075.	-1.6	-.0321	270.
12:36:17	1.140	134913.	-7831.	21043.	-1.3	-.0378	270.
12:36:18	1.138	133730.	-7556.	21022.	-0.7	-.0589	270.
12:36:19	1.136	132548.	-7282.	21014.	-0.1	-.0849	270.
12:36:20	1.134	131369.	-7010.	21019.	0.5	-.1049	270.
12:36:21	1.130	130193.	-6739.	21036.	1.0	-.1111	270.
12:36:22	1.127	129021.	-6469.	21061.	1.3	-.1031	270.
12:36:23	1.124	127851.	-6201.	21089.	1.4	-.0880	270.
12:36:24	1.122	126685.	-5934.	21118.	1.3	-.0761	270.
12:36:25	1.120	125520.	-5669.	21142.	1.0	-.0747	270.
12:36:26	1.118	124357.	-5406.	21160.	0.7	-.0785	270.
12:36:27	1.115	123196.	-5143.	21170.	0.2	-.0734	270.
12:36:28	1.113	122038.	-4882.	21171.	-0.2	-.0638	270.
12:36:29	1.111	120881.	-4622.	21164.	-0.5	-.0734	270.
12:36:30	1.109	119726.	-4362.	21151.	-0.8	-.0792	270.
12:36:31	1.107	118574.	-4104.	21133.	-0.9	-.0492	270.
12:36:32	1.106	117423.	-3846.	21112.	-1.0	-.0179	270.
12:36:33	1.106	116273.	-3588.	21090.	-1.1	-.0033	270.
12:36:34	1.105	115123.	-3331.	21068.	-1.0	-.0143	270.
12:36:35	1.104	113974.	-3075.	21048.	-0.8	-.0525	270.
12:36:36	1.102	112825.	-2819.	21033.	-0.5	-.0914	270.
12:36:37	1.099	111679.	-2567.	21027.	-0.1	-.0947	270.
12:36:38	1.097	110534.	-2322.	21029.	0.4	-.0708	269.
12:36:39	1.095	109389.	-2091.	21041.	0.8	-.0505	268.
12:36:40	1.094	108241.	-1877.	21061.	1.2	-.0516	267.
12:36:41	1.093	107092.	-1686.	21088.	1.4	-.0681	266.
12:36:42	1.091	105940.	-1520.	21119.	1.6	-.0824	265.
12:36:43	1.089	104788.	-1378.	21152.	1.6	-.0827	263.
12:36:44	1.087	103635.	-1259.	21183.	1.4	-.0677	262.
12:36:45	1.085	102483.	-1157.	21208.	1.1	-.0349	262.

(CONTINUED)

T-38 AT 1.05M AT 21.2K MSL  
BOOM AT SITE 00 AT 1238 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:36:46	1.085	101331.	-1071.	21228.	0.8	0.0021	261.
12:36:47	1.085	100177.	-994.	21239.	0.4	0.0043	260.
12:36:48	1.085	99023.	-924.	21243.	0.0	-.0402	260.
12:36:49	1.083	97870.	-856.	21239.	-0.3	-.0885	260.
12:36:50	1.080	96720.	-789.	21229.	-0.7	-.0791	260.
12:36:51	1.079	95573.	-722.	21213.	-0.9	-.0326	260.
12:36:52	1.078	94426.	-654.	21192.	-1.1	-.0077	260.
12:36:53	1.078	93280.	-587.	21170.	-1.1	-.0017	260.
12:36:54	1.078	92134.	-520.	21148.	-1.0	-.0018	260.
12:36:55	1.078	90988.	-454.	21129.	-0.9	0.0036	260.
12:36:56	1.078	89841.	-389.	21112.	-0.7	0.0133	260.
12:36:57	1.079	88694.	-324.	21100.	-0.5	0.0110	260.
12:36:58	1.079	87547.	-259.	21090.	-0.4	-.0102	260.
12:36:59	1.078	86400.	-195.	21084.	-0.3	-.0319	260.
12:37:00	1.077	85255.	-130.	21080.	-0.1	-.0415	260.
12:37:01	1.076	84110.	-67.	21078.	-0.1	-.0362	260.
12:37:02	1.075	82966.	-4.	21077.	0.0	-.0250	260.
12:37:03	1.074	81824.	58.	21078.	0.0	-.0244	260.
12:37:04	1.073	80682.	119.	21079.	0.1	-.0404	260.
12:37:05	1.072	79541.	179.	21081.	0.1	-.0555	260.
12:37:06	1.070	78402.	238.	21084.	0.2	-.0471	260.
12:37:07	1.069	77264.	297.	21088.	0.2	-.0234	260.
12:37:08	1.068	76128.	356.	21093.	0.2	-.0193	260.
12:37:09	1.068	74992.	415.	21097.	0.2	-.0345	260.
12:37:10	1.066	73856.	473.	21100.	0.1	-.0372	260.
12:37:11	1.066	72723.	531.	21102.	0.0	-.0248	260.
12:37:12	1.065	71589.	589.	21102.	-0.1	-.0132	260.
12:37:13	1.065	70457.	646.	21099.	-0.2	-.0093	260.
12:37:14	1.064	69324.	703.	21092.	-0.4	-.0132	260.
12:37:15	1.064	68192.	758.	21084.	-0.5	-.0247	260.
12:37:16	1.063	67061.	814.	21075.	-0.4	-.0391	260.
12:37:17	1.062	65931.	870.	21067.	-0.3	-.0374	260.
12:37:18	1.061	64802.	926.	21063.	-0.1	-.0099	260.
12:37:19	1.061	63673.	983.	21064.	0.2	0.0172	260.
12:37:20	1.062	62544.	1039.	21069.	0.4	0.0204	260.
12:37:21	1.062	61415.	1095.	21079.	0.5	-.0047	260.
12:37:22	1.061	60285.	1149.	21091.	0.7	-.0344	260.
12:37:23	1.060	59157.	1203.	21105.	0.7	-.0481	259.
12:37:24	1.059	58030.	1255.	21120.	0.8	-.0477	259.
12:37:25	1.057	56905.	1308.	21137.	0.8	-.0426	259.
12:37:26	1.056	55780.	1360.	21153.	0.8	-.0384	259.

(CONTINUED)



T-38 AT 1.05M AT 21.2K MSL  
BOOM AT SITE 00 AT 1238 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:37:27	1.055	54658.	1413.	21168.	0.7	-.0343	259.
12:37:28	1.054	53536.	1466.	21181.	0.6	-.0276	260.
12:37:29	1.054	52415.	1520.	21191.	0.4	-.0211	260.
12:37:30	1.053	51295.	1575.	21198.	0.3	-.0155	260.
12:37:31	1.053	50175.	1631.	21201.	0.1	-.0107	260.
12:37:32	1.052	49056.	1688.	21202.	0.0	-.0011	260.
12:37:33	1.053	47937.	1745.	21201.	-0.1	0.0101	260.
12:37:34	1.053	46817.	1802.	21197.	-0.2	0.0159	260.
12:37:35	1.053	45697.	1860.	21192.	-0.3	0.0146	260.
12:37:36	1.054	44577.	1918.	21185.	-0.4	0.0081	260.
12:37:37	1.054	43456.	1976.	21177.	-0.5	-.0012	260.
12:37:38	1.054	42336.	2035.	21167.	-0.5	-.0128	260.
12:37:39	1.053	41216.	2095.	21156.	-0.6	-.0236	260.
12:37:40	1.052	40096.	2155.	21144.	-0.6	-.0273	260.
12:37:41	1.051	38978.	2214.	21133.	-0.5	-.0179	260.
12:37:42	1.051	37860.	2274.	21124.	-0.4	0.0002	260.
12:37:43	1.051	36742.	2333.	21117.	-0.3	0.0143	260.
12:37:45	1.052	34952.	2427.	21112.	0.0	0.0138	260.
12:37:46	1.053	33832.	2485.	21114.	0.1	-.0002	260.
12:37:47	1.052	32713.	2542.	21118.	0.2	-.0173	260.
12:37:48	1.052	31594.	2598.	21123.	0.3	-.0248	260.
12:37:49	1.051	30476.	2654.	21128.	0.2	-.0202	260.
12:37:50	1.050	29358.	2709.	21132.	0.2	-.0102	260.
12:37:51	1.050	28241.	2764.	21134.	0.1	-.0020	260.
12:37:52	1.050	27124.	2819.	21134.	-0.1	-.0007	260.
12:37:53	1.050	26007.	2873.	21131.	-0.2	-.0086	260.
12:37:54	1.050	24890.	2926.	21124.	-0.4	-.0170	259.
12:37:55	1.049	23773.	2978.	21116.	-0.5	-.0155	259.
12:37:56	1.049	22658.	3031.	21105.	-0.6	-.0025	259.
12:37:57	1.049	21542.	3083.	21093.	-0.7	0.0078	259.
12:37:58	1.049	20426.	3135.	21079.	-0.7	0.0102	259.
12:37:59	1.050	19309.	3187.	21065.	-0.7	0.0096	259.
12:37:60	1.050	18193.	3238.	21051.	-0.7	0.0095	259.
12:38:01	1.050	17075.	3288.	21037.	-0.6	0.0079	259.
12:38:02	1.050	15958.	3337.	21025.	-0.6	0.0012	259.
12:38:03	1.050	14841.	3386.	21016.	-0.4	-.0004	259.
12:38:04	1.050	13723.	3435.	21008.	-0.4	0.0033	259.
12:38:05	1.050	12606.	3483.	21002.	-0.3	-.0039	259.
12:38:06	1.050	11488.	3531.	20997.	-0.2	-.0165	259.
12:38:07	1.049	10371.	3579.	20994.	-0.1	-.0116	259.
12:38:08	1.049	9254.	3626.	20993.	-0.1	0.0011	259.

(CONTINUED)

T-38 AT 1.05M AT 21.2K MSL  
 BOOM AT SITE 00 AT 1238 ON 03 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
12:38:09	1.049	8138.	3672.	20992.	0.0	0.0082 259.
12:38:10	1.050	7021.	3717.	20992.	0.0	0.0093 259.

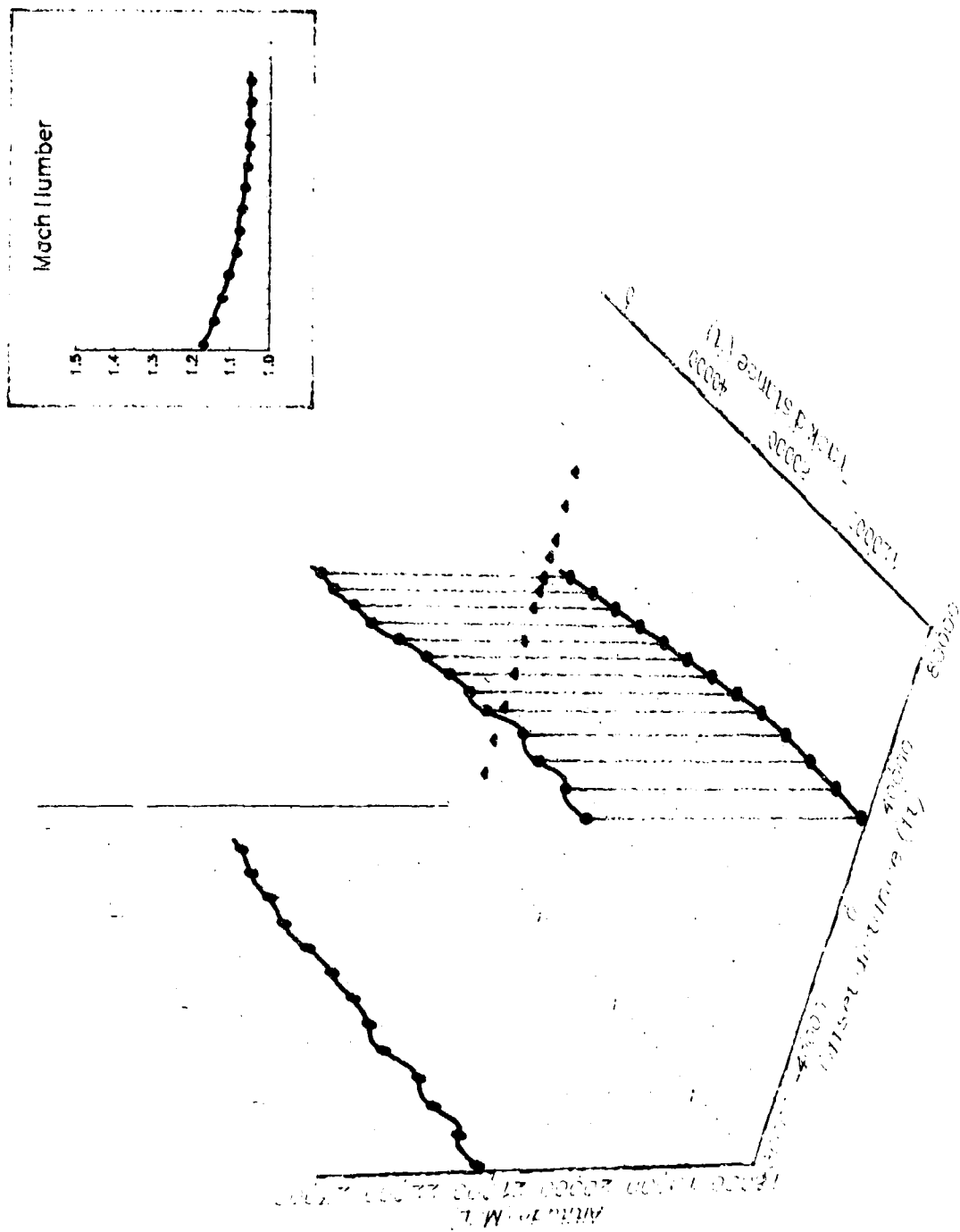


Figure B-9. T-36 on 3 Aug 57 at 1239

AT-38 AT 1.17M AT 41.4K MSL  
BOOM AT SITE 00 AT 0719 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:17:13	0.900	147975.	2940.	51594.	0.9	0.0773	250.
7:17:14	0.903	147106.	2845.	51603.	0.2	0.0816	250.
7:17:15	0.905	146234.	2751.	51601.	-0.4	0.0880	250.
7:17:16	0.908	145359.	2656.	51590.	-1.1	0.0957	250.
7:17:17	0.912	144481.	2560.	51566.	-1.9	0.1040	250.
7:17:18	0.915	143601.	2463.	51529.	-2.8	0.1043	250.
7:17:19	0.918	142718.	2365.	51477.	-3.9	0.0945	250.
7:17:20	0.921	141833.	2265.	51408.	-4.9	0.0810	250.
7:17:21	0.924	140947.	2164.	51322.	-6.0	0.0842	250.
7:17:22	0.927	140060.	2061.	51218.	-7.1	0.1107	250.
7:17:23	0.931	139172.	1957.	51096.	-8.2	0.1518	250.
7:17:24	0.936	138282.	1851.	50958.	-9.1	0.1869	249.
7:17:25	0.942	137388.	1742.	50807.	-9.7	0.2180	249.
7:17:26	0.950	136489.	1630.	50648.	-10.0	0.2473	249.
7:17:27	0.958	135582.	1517.	50485.	-9.9	0.2804	249.
7:17:28	0.968	134666.	1404.	50324.	-9.6	0.2820	249.
7:17:29	0.976	133740.	1292.	50168.	-9.2	0.2313	250.
7:17:30	0.982	132805.	1183.	50017.	-8.8	0.1332	250.
7:17:31	0.985	131865.	1076.	49872.	-8.6	0.0321	250.
7:17:32	0.985	130923.	970.	49729.	-8.5	0.0080	250.
7:17:33	0.986	129980.	861.	49584.	-8.8	0.1102	250.
7:17:34	0.992	129036.	747.	49433.	-9.2	0.2575	249.
7:17:35	1.002	128087.	626.	49271.	-9.8	0.3165	249.
7:17:36	1.011	127131.	498.	49097.	-10.4	0.2512	249.
7:17:37	1.018	126168.	368.	48913.	-10.8	0.1778	249.
7:17:38	1.023	125201.	238.	48723.	-11.0	0.1473	249.
7:17:39	1.027	124229.	111.	48529.	-11.1	0.1471	249.
7:17:40	1.032	123252.	-14.	48336.	-11.0	0.1464	249.
7:17:41	1.036	122269.	-137.	48144.	-10.8	0.1323	249.
7:17:42	1.040	121282.	-259.	47954.	-10.6	0.1202	249.
7:17:43	1.044	120290.	-381.	47766.	-10.5	0.1397	249.
7:17:44	1.049	119293.	-500.	47578.	-10.5	0.1740	250.
7:17:45	1.055	118290.	-614.	47390.	-10.5	0.2229	250.
7:17:46	1.063	117279.	-719.	47199.	-10.7	0.2721	251.
7:17:47	1.073	116259.	-811.	47003.	-10.9	0.2964	252.
7:17:48	1.082	115229.	-888.	46799.	-11.3	0.2568	253.
7:17:49	1.089	114191.	-952.	46587.	-11.7	0.1678	253.
7:17:50	1.093	113149.	-1008.	46364.	-12.2	0.1142	254.
7:17:51	1.096	112106.	-1064.	46131.	-12.7	0.1356	253.
7:17:52	1.101	111060.	-1127.	45889.	-13.1	0.1920	253.
7:17:53	1.108	110011.	-1202.	45638.	-13.5	0.2373	252.

(CONTINUED)

AT-38 AT 1.17M AT 41.4K MSL  
BOOM AT SITE 00 AT 0719 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:17:54	1.116	108958.	-1287.	45379.	-13.8	0.2651	252.
7:17:55	1.125	107897.	-1376.	45113.	-14.0	0.2763	252.
7:17:56	1.133	106829.	-1463.	44843.	-14.0	0.2843	252.
7:17:57	1.143	105750.	-1539.	44572.	-13.9	0.2981	253.
7:17:58	1.152	104660.	-1602.	44301.	-13.7	0.3087	254.
7:17:59	1.162	103559.	-1648.	44034.	-13.4	0.2923	255.
7:18:00	1.171	102446.	-1677.	43771.	-13.1	0.2341	256.
7:18:01	1.176	101324.	-1691.	43510.	-12.9	0.1416	256.
7:18:02	1.179	100197.	-1690.	43253.	-12.7	0.0562	257.
7:18:03	1.181	99067.	-1677.	43000.	-12.4	0.0286	258.
7:18:04	1.182	97934.	-1655.	42752.	-12.0	0.0618	258.
7:18:05	1.184	96797.	-1626.	42516.	-11.3	0.1068	258.
7:18:06	1.188	95655.	-1592.	42295.	-10.3	0.1301	258.
7:18:07	1.192	94504.	-1557.	42096.	-9.1	0.1264	258.
7:18:08	1.196	93345.	-1524.	41921.	-7.9	0.1093	258.
7:18:09	1.199	92179.	-1496.	41772.	-6.7	0.0839	258.
7:18:10	1.201	91007.	-1475.	41646.	-5.6	0.0453	258.
7:18:11	1.202	89832.	-1461.	41539.	-4.7	0.0112	257.
7:18:12	1.201	88656.	-1452.	41450.	-4.0	-.0061	257.
7:18:13	1.201	87478.	-1445.	41374.	-3.4	-.0049	257.
7:18:14	1.201	86300.	-1435.	41309.	-2.9	-.0035	257.
7:18:15	1.201	85122.	-1422.	41251.	-2.7	-.0099	257.
7:18:16	1.200	83944.	-1406.	41197.	-2.6	-.0093	258.
7:18:17	1.200	82767.	-1387.	41144.	-2.5	-.0055	258.
7:18:18	1.200	81589.	-1366.	41092.	-2.4	-.0053	258.
7:18:19	1.200	80412.	-1345.	41045.	-2.1	0.0035	258.
7:18:20	1.200	79234.	-1325.	41007.	-1.5	0.0235	258.
7:18:21	1.201	78055.	-1307.	40982.	-0.8	0.0333	258.
7:18:22	1.202	76874.	-1291.	40972.	-0.3	0.0090	257.
7:18:23	1.202	75694.	-1275.	40971.	0.0	-.0336	257.
7:18:24	1.200	74514.	-1260.	40972.	0.1	-.0524	257.
7:18:25	1.199	73337.	-1243.	40973.	-0.1	-.0387	258.
7:18:26	1.198	72160.	-1223.	40969.	-0.3	-.0164	258.
7:18:27	1.197	70984.	-1203.	40963.	-0.3	-.0097	258.
7:18:28	1.197	69808.	-1181.	40957.	-0.2	-.0115	258.
7:18:29	1.196	68633.	-1160.	40955.	0.1	-.0082	258.
7:18:30	1.196	67458.	-1140.	40959.	0.4	-.0061	258.
7:18:31	1.196	66283.	-1121.	40970.	0.6	-.0261	258.
7:18:32	1.194	65109.	-1105.	40984.	0.7	-.0691	257.
7:18:33	1.192	63938.	-1091.	40998.	0.6	-.0970	257.
7:18:34	1.189	62769.	-1079.	41009.	0.5	-.0836	257.

(CONTINUED)

AT-38 AT 1.17M AT 41.4K MSL  
BOOM AT SITE 00 AT 0719 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:18:35	1.187	61602.	-1069.	41017.	0.4	-.0243	257.
7:18:36	1.187	60437.	-1060.	41025.	0.4	0.0607	257.
7:18:37	1.190	59270.	-1049.	41035.	0.6	0.1185	257.
7:18:38	1.194	58099.	-1032.	41051.	0.9	0.1122	258.
7:18:39	1.197	56925.	-1009.	41071.	1.1	0.0556	258.
7:18:40	1.198	55749.	-978.	41094.	1.1	-.0275	258.
7:18:41	1.196	54574.	-942.	41116.	1.0	-.1070	258.
7:18:42	1.191	53403.	-908.	41134.	0.8	-.1479	258.
7:18:43	1.186	52236.	-879.	41149.	0.7	-.1450	258.
7:18:44	1.182	51073.	-856.	41162.	0.6	-.1072	258.
7:18:45	1.180	49913.	-840.	41175.	0.6	-.0471	257.
7:18:46	1.179	48756.	-827.	41188.	0.7	0.0106	257.
7:18:47	1.180	47598.	-816.	41204.	0.8	0.0338	257.
7:18:48	1.181	46439.	-806.	41222.	0.9	0.0059	257.
7:18:49	1.180	45279.	-797.	41241.	0.9	-.0525	257.
7:18:50	1.178	44122.	-787.	41258.	0.8	-.0960	257.
7:18:51	1.174	42967.	-778.	41272.	0.7	-.0955	257.
7:18:52	1.172	41815.	-769.	41284.	0.6	-.0518	257.
7:18:53	1.171	40665.	-760.	41295.	0.5	0.0137	257.
7:18:54	1.173	39515.	-751.	41306.	0.5	0.0563	257.
7:18:55	1.174	38363.	-743.	41315.	0.4	0.0517	257.
7:18:56	1.176	37209.	-735.	41323.	0.4	0.0182	257.
7:18:57	1.176	36055.	-726.	41330.	0.4	-.0161	257.
7:18:58	1.175	34901.	-718.	41337.	0.3	-.0348	257.
7:18:59	1.173	33748.	-709.	41343.	0.3	-.0672	257.
7:19:00	1.171	32597.	-700.	41348.	0.2	-.1057	257.
7:19:01	1.167	31450.	-691.	41353.	0.3	-.1045	257.
7:19:02	1.164	30306.	-681.	41359.	0.3	-.0424	257.
7:19:03	1.164	29163.	-671.	41365.	0.3	0.0532	257.
7:19:04	1.167	28019.	-662.	41370.	0.2	0.1199	257.
7:19:05	1.171	26871.	-655.	41374.	0.1	0.1169	257.
7:19:06	1.174	25719.	-648.	41376.	0.0	0.0583	257.
7:19:07	1.175	24565.	-642.	41375.	-0.1	-.0148	257.
7:19:08	1.174	23412.	-636.	41373.	-0.1	-.0668	257.
7:19:09	1.171	22261.	-629.	41371.	-0.1	-.0879	257.
7:19:10	1.168	21113.	-623.	41369.	0.0	-.0919	257.
7:19:11	1.165	19967.	-616.	41370.	0.1	-.0932	257.
7:19:12	1.162	18825.	-611.	41372.	0.2	-.0887	257.
7:19:13	1.160	17685.	-605.	41377.	0.3	-.0741	257.
7:19:14	1.157	16548.	-601.	41383.	0.4	-.0640	257.
7:19:15	1.155	15413.	-597.	41392.	0.5	-.0630	257.

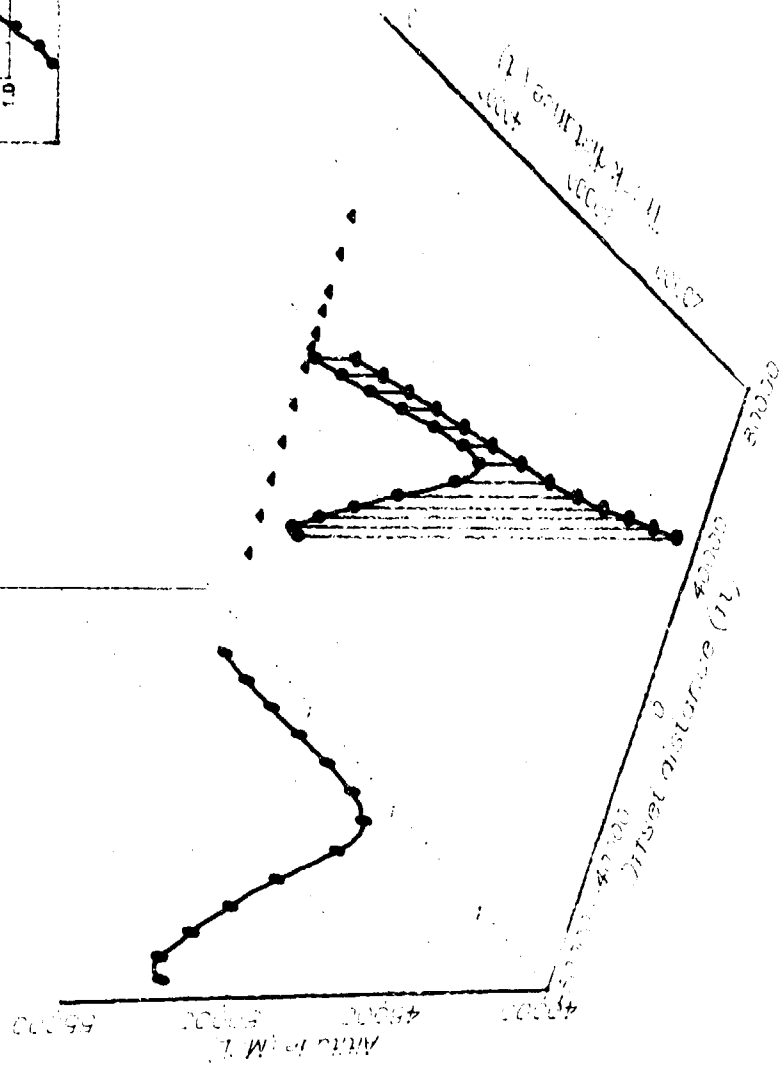
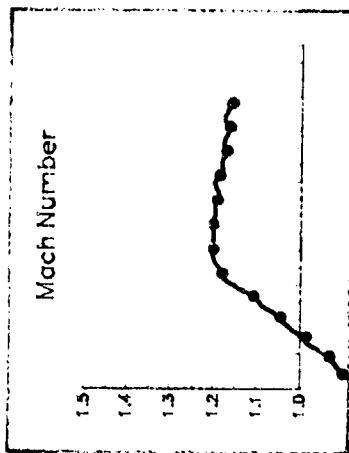


Figure B-10. AT-38 on 4 Aug 87 at 0719

AT-38 AT 1.12M AT 32.3K MSL  
BOOM AT SITE 00 AT 0730 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:27:47	0.922	149409.	1640.	41099.	-0.4	0.0522	260.
7:27:48	0.924	148505.	1693.	41085.	-1.5	0.0658	260.
7:27:49	0.927	147600.	1739.	41053.	-2.5	0.0928	260.
7:27:50	0.930	146692.	1779.	41003.	-3.6	0.1081	259.
7:27:51	0.933	145781.	1813.	40937.	-4.7	0.1081	259.
7:27:52	0.937	144868.	1844.	40853.	-5.7	0.1000	259.
7:27:53	0.939	143953.	1872.	40754.	-6.6	0.0804	259.
7:27:54	0.942	143037.	1902.	40641.	-7.3	0.1035	259.
7:27:55	0.947	142119.	1933.	40517.	-7.9	0.1901	259.
7:27:56	0.954	141196.	1968.	40384.	-8.3	0.2810	259.
7:27:57	0.964	140266.	2005.	40244.	-8.6	0.3013	259.
7:27:58	0.973	139326.	2043.	40099.	-8.8	0.2704	259.
7:27:59	0.981	138379.	2081.	39948.	-9.1	0.2130	259.
7:28:00	0.987	137425.	2118.	39793.	-9.3	0.1624	259.
7:28:01	0.991	136467.	2150.	39634.	-9.4	0.1498	258.
7:28:02	0.996	135503.	2173.	39472.	-9.5	0.1625	258.
7:28:03	1.002	134535.	2182.	39309.	-9.4	0.1709	257.
7:28:04	1.007	133561.	2172.	39147.	-9.3	0.1599	255.
7:28:05	1.012	132582.	2144.	38987.	-9.1	0.1591	254.
7:28:06	1.016	131598.	2097.	38829.	-9.0	0.1781	253.
7:28:07	1.021	130609.	2034.	38673.	-8.9	0.2180	252.
7:28:08	1.028	129615.	1960.	38516.	-8.9	0.2215	252.
7:28:09	1.033	128614.	1878.	38358.	-8.9	0.1869	252.
7:28:10	1.038	127607.	1793.	38198.	-8.9	0.1804	252.
7:28:11	1.044	126595.	1707.	38037.	-8.9	0.2087	252.
7:28:12	1.050	125577.	1622.	37875.	-8.9	0.2343	252.
7:28:13	1.057	124551.	1536.	37712.	-8.9	0.2330	252.
7:28:14	1.063	123517.	1449.	37549.	-8.9	0.1962	252.
7:28:15	1.067	122478.	1362.	37385.	-8.8	0.1465	252.
7:28:16	1.070	121433.	1274.	37221.	-8.8	0.1288	252.
7:28:17	1.074	120385.	1184.	37057.	-8.8	0.1428	251.
7:28:18	1.078	119332.	1093.	36892.	-8.8	0.1627	251.
7:28:19	1.082	118274.	999.	36726.	-8.8	0.1721	251.
7:28:20	1.087	117211.	904.	36559.	-8.8	0.1759	251.
7:28:21	1.092	116142.	808.	36392.	-8.8	0.1819	251.
7:28:22	1.098	115068.	712.	36223.	-8.8	0.1908	251.
7:28:23	1.103	113988.	616.	36054.	-8.8	0.1836	251.
7:28:24	1.107	112902.	524.	35883.	-8.8	0.1329	252.
7:28:25	1.110	111811.	436.	35712.	-8.9	0.0883	252.
7:28:26	1.111	110716.	357.	35538.	-8.9	0.0689	253.
7:28:27	1.112	109619.	289.	35362.	-9.1	0.0798	253.

(CONTINUED)



AT-38 AT 1.12M AT 32.3K MSL  
BOOM AT SITE 00 AT 0730 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:28:28	1.114	108518.	236.	35183.	-9.3	0.1374	254.
7:28:29	1.118	107414.	198.	34998.	-9.5	0.1723	255.
7:28:30	1.122	106303.	177.	34808.	-9.7	0.1642	256.
7:28:31	1.125	105189.	172.	34614.	-9.9	0.1642	257.
7:28:32	1.129	104069.	180.	34417.	-9.9	0.2162	257.
7:28:33	1.135	102942.	196.	34218.	-9.9	0.2482	258.
7:28:34	1.140	101808.	216.	34019.	-9.9	0.2107	258.
7:28:35	1.144	100667.	236.	33820.	-9.8	0.1509	258.
7:28:36	1.146	99520.	252.	33622.	-9.7	0.1005	257.
7:28:37	1.147	98370.	265.	33427.	-9.6	0.0733	257.
7:28:38	1.147	97217.	277.	33234.	-9.3	0.0610	257.
7:28:39	1.147	96061.	288.	33047.	-8.9	0.0351	257.
7:28:40	1.147	94903.	301.	32871.	-8.2	-.0091	257.
7:28:41	1.145	93742.	316.	32711.	-7.2	-.0538	257.
7:28:42	1.142	92580.	332.	32575.	-6.0	-.0354	258.
7:28:43	1.142	91416.	349.	32466.	-4.7	0.0696	258.
7:28:44	1.145	90248.	365.	32384.	-3.3	0.1743	257.
7:28:45	1.151	89074.	378.	32328.	-2.1	0.1778	257.
7:28:46	1.155	87893.	389.	32295.	-1.1	0.0659	257.
7:28:47	1.154	86709.	397.	32281.	-0.3	-.0926	257.
7:28:48	1.150	85529.	404.	32282.	0.3	-.1440	257.
7:28:49	1.146	84352.	413.	32292.	0.6	-.0900	257.
7:28:50	1.145	83179.	421.	32307.	0.7	-.0061	257.
7:28:51	1.145	82005.	430.	32321.	0.6	0.0350	257.
7:28:52	1.147	80831.	440.	32332.	0.4	0.0287	257.
7:28:53	1.147	79656.	449.	32339.	0.2	0.0131	257.
7:28:54	1.148	78481.	460.	32341.	0.0	0.0021	257.
7:28:55	1.147	77305.	470.	32337.	-0.3	-.0143	257.
7:28:56	1.146	76130.	480.	32328.	-0.6	-.0429	257.
7:28:57	1.145	74956.	490.	32313.	-0.8	-.0645	257.
7:28:58	1.143	73784.	499.	32294.	-1.1	-.0577	257.
7:28:59	1.141	72614.	507.	32270.	-1.2	-.0159	257.
7:29:00	1.141	71445.	514.	32243.	-1.3	0.0358	257.
7:29:01	1.143	70274.	521.	32215.	-1.4	0.0497	257.
7:29:02	1.144	69103.	529.	32188.	-1.2	0.0235	257.
7:29:03	1.144	67930.	537.	32165.	-1.0	-.0249	257.
7:29:04	1.142	66758.	546.	32150.	-0.5	-.0816	257.
7:29:05	1.139	65588.	556.	32144.	0.0	-.1092	257.
7:29:06	1.136	64422.	567.	32151.	0.6	-.0909	257.
7:29:07	1.134	63259.	578.	32170.	1.1	-.0082	257.
7:29:08	1.135	62096.	589.	32197.	1.4	0.0988	257.

(CONTINUED)

AT-38 AT 1.12M AT 32.3K MSL  
BOOM AT SITE 00 AT 0730 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:29:09	1.139	60931.	597.	32228.	1.6	0.1005	257.
7:29:10	1.141	59762.	604.	32259.	1.5	-.0167	257.
7:29:11	1.138	58594.	611.	32288.	1.4	-.1560	257.
7:29:12	1.133	57431.	618.	32314.	1.2	-.2230	257.
7:29:13	1.126	56274.	626.	32337.	1.0	-.1605	257.
7:29:14	1.123	55123.	635.	32356.	0.9	-.0525	257.
7:29:15	1.122	53973.	645.	32372.	0.7	-.0309	257.
7:29:16	1.121	52824.	655.	32386.	0.6	-.0162	257.
7:29:17	1.122	51676.	667.	32398.	0.5	0.0763	257.
7:29:18	1.125	50525.	678.	32408.	0.4	0.0997	257.
7:29:19	1.127	49372.	689.	32415.	0.3	0.0124	257.
7:29:20	1.127	48218.	699.	32421.	0.3	-.0511	257.
7:29:21	1.125	47065.	709.	32425.	0.1	-.0493	257.
7:29:22	1.124	45914.	718.	32427.	0.0	-.0444	257.
7:29:23	1.121	44764.	727.	32426.	-0.1	-.1048	257.
7:29:24	1.118	43618.	736.	32422.	-0.3	-.0961	257.
7:29:25	1.116	42474.	745.	32416.	-0.3	0.0152	257.
7:29:26	1.118	41330.	755.	32408.	-0.4	0.1186	257.
7:29:27	1.123	40182.	764.	32401.	-0.3	0.1841	257.
7:29:28	1.129	39029.	773.	32395.	-0.3	0.1415	257.
7:29:29	1.131	37872.	780.	32391.	-0.1	-.0038	257.
7:29:30	1.128	36714.	788.	32388.	-0.1	-.1694	257.
7:29:31	1.122	35562.	796.	32385.	-0.2	-.1784	257.
7:29:32	1.119	34415.	807.	32379.	-0.5	-.0373	257.
7:29:33	1.119	33269.	819.	32367.	-0.7	0.0813	257.
7:29:34	1.122	32121.	833.	32351.	-0.9	0.0991	257.
7:29:35	1.125	30970.	847.	32333.	-0.9	0.0521	257.
7:29:36	1.126	29817.	861.	32313.	-1.0	0.0456	257.
7:29:37	1.128	28663.	873.	32293.	-1.0	0.0828	257.
7:29:38	1.130	27506.	883.	32274.	-0.9	0.0490	257.
7:29:39	1.130	26348.	891.	32258.	-0.7	-.0750	257.
7:29:40	1.126	25192.	899.	32244.	-0.6	-.1390	257.
7:29:41	1.122	24040.	908.	32234.	-0.5	-.0935	257.
7:29:42	1.120	22891.	919.	32225.	-0.4	-.0229	257.
7:29:43	1.120	21743.	932.	32216.	-0.5	-.0030	257.
7:29:44	1.120	20595.	946.	32207.	-0.5	0.0032	257.
7:29:45	1.120	19447.	960.	32196.	-0.5	0.0230	257.
7:29:46	1.121	18298.	974.	32185.	-0.6	0.0134	257.
7:29:47	1.120	17149.	987.	32173.	-0.6	-.0324	257.
7:29:48	1.119	16001.	1001.	32162.	-0.5	-.0628	257.
7:29:49	1.117	14855.	1016.	32151.	-0.5	-.0685	257.
7:29:50	1.115	13711.	1033.	32142.	-0.4	-.0688	258.

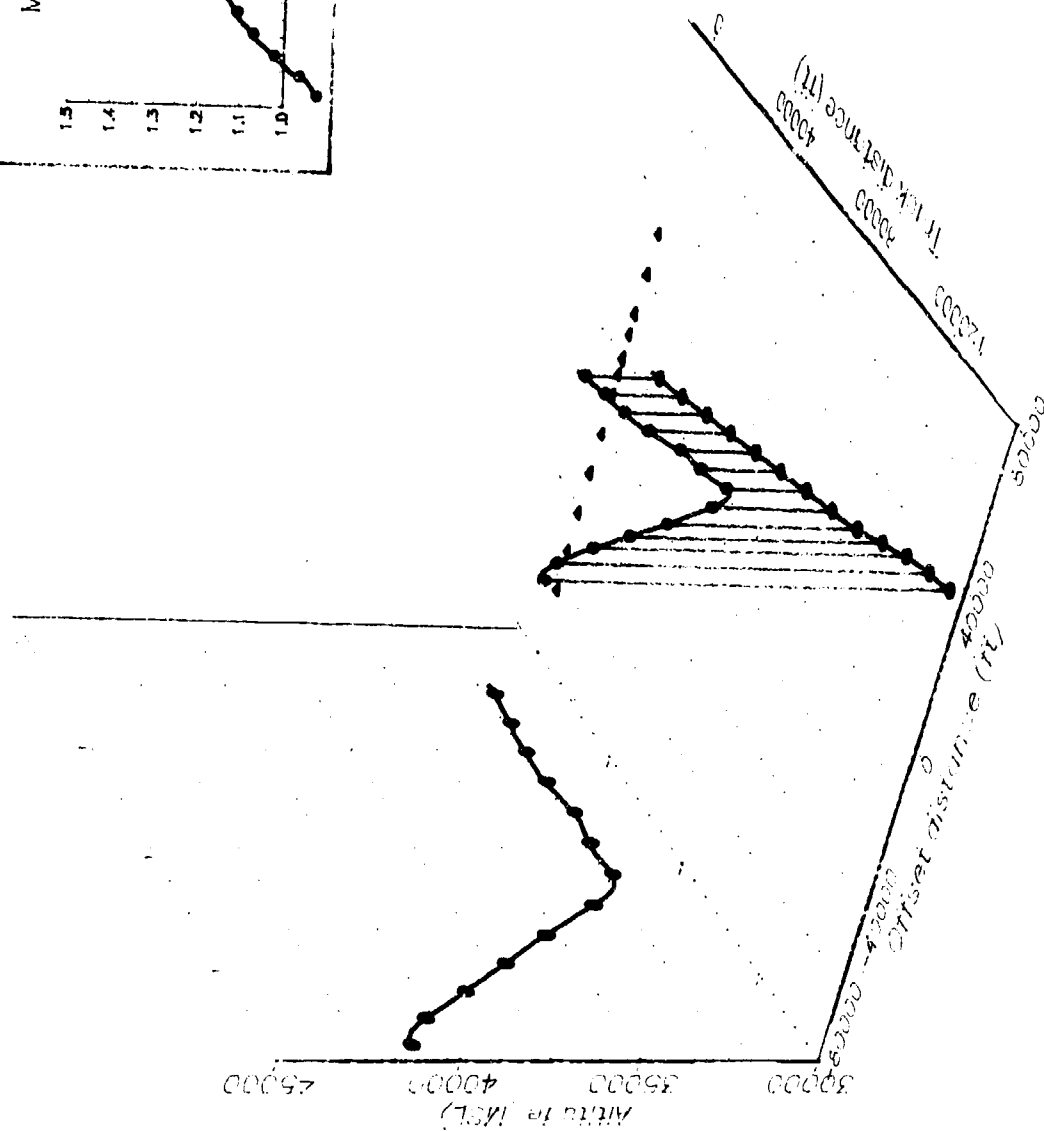
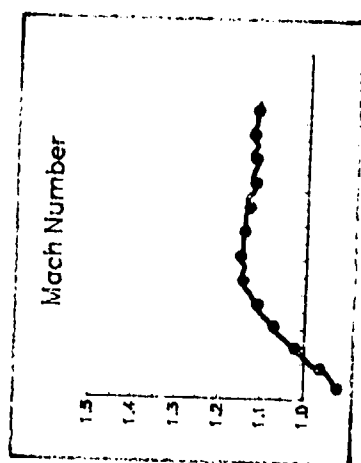


Figure B-11. AT-38 on 4 Aug 87 at 0730

AT-38 AT 1.15M AT 16.2K MSL  
BOOM AT SITE 00 AT 0736 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:34:40	1.076	142799.	20968.	25979.	-10.5	0.0236	230.
7:34:41	1.076	141807.	20493.	25708.	-11.0	0.0250	230.
7:34:42	1.076	140814.	20020.	25549.	-11.4	0.0460	230.
7:34:43	1.077	139820.	19549.	25321.	-11.8	0.1167	230.
7:34:44	1.081	138823.	19079.	25085.	-12.1	0.2048	230.
7:34:45	1.087	137821.	18609.	24841.	-12.5	0.2608	231.
7:34:46	1.093	136812.	18139.	24589.	-12.8	0.2446	231.
7:34:47	1.098	135796.	17668.	24328.	-13.1	0.1976	231.
7:34:48	1.102	134774.	17198.	24062.	-13.3	0.1862	231.
7:34:49	1.105	133746.	16727.	23791.	-13.4	0.1889	231.
7:34:50	1.109	132712.	16258.	23519.	-13.4	0.1836	231.
7:34:51	1.112	131670.	15789.	23247.	-13.2	0.1731	231.
7:34:52	1.116	130620.	15323.	22977.	-13.1	0.1665	232.
7:34:53	1.119	129562.	14860.	22709.	-13.0	0.1568	232.
7:34:54	1.123	128497.	14402.	22441.	-13.0	0.1433	233.
7:34:55	1.126	127424.	13948.	22170.	-13.2	0.1519	233.
7:34:56	1.129	126346.	13500.	21891.	-13.6	0.1654	233.
7:34:57	1.132	125262.	13056.	21603.	-14.0	0.1606	234.
7:34:58	1.136	124172.	12616.	21306.	-14.3	0.1694	234.
7:34:59	1.139	123077.	12180.	21003.	-14.5	0.1523	234.
7:35:00	1.143	121975.	11749.	20696.	-14.5	0.1311	234.
7:35:01	1.147	120866.	11324.	20390.	-14.4	0.0920	235.
7:35:02	1.149	119747.	10910.	20087.	-14.1	0.0544	236.
7:35:03	1.149	118618.	10513.	19791.	-13.7	0.0623	237.
7:35:04	1.151	117476.	10140.	19504.	-13.2	0.1173	238.
7:35:05	1.156	116316.	9797.	19227.	-12.7	0.1462	240.
7:35:06	1.162	115139.	9488.	18960.	-12.1	0.1131	242.
7:35:07	1.162	113944.	9218.	18705.	-11.4	0.0464	244.
7:35:08	1.161	112736.	8986.	18465.	-10.6	-.0269	246.
7:35:09	1.158	111518.	8788.	18243.	-9.8	-.0753	248.
7:35:10	1.154	110294.	8620.	18041.	-8.8	-.0666	249.
7:35:11	1.151	109066.	8474.	17860.	-8.0	-.0014	250.
7:35:12	1.150	107833.	8343.	17695.	-7.3	0.0052	251.
7:35:13	1.148	106598.	8222.	17542.	-6.9	-.0610	251.
7:35:14	1.143	105363.	8111.	17395.	-6.7	-.1262	251.
7:35:15	1.138	104131.	8013.	17251.	-6.7	-.1324	252.
7:35:16	1.133	102900.	7935.	17108.	-6.7	-.0739	253.
7:35:17	1.131	101671.	7884.	16966.	-6.6	0.0133	255.
7:35:18	1.131	100439.	7864.	16829.	-6.2	0.0611	256.
7:35:19	1.131	99204.	7875.	16702.	-5.5	0.0404	258.
7:35:20	1.130	97966.	7907.	16594.	-4.6	-.0476	259.

(CONTINUED)

AT-38 AT 1.15M AT 16.2K MSL  
BOOM AT SITE 00 AT 0736 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:35:21	1.127	96729.	7952.	16508.	-3.5	-.1688	259.
7:35:22	1.120	95496.	7997.	16445.	-2.4	-.2341	259.
7:35:23	1.114	94268.	8032.	16404.	-1.5	-.1913	258.
7:35:24	1.109	93046.	8053.	16379.	-0.9	-.0998	257.
7:35:25	1.108	91828.	8057.	16366.	-0.4	-.0215	256.
7:35:26	1.107	90610.	8048.	16362.	0.0	-.0236	256.
7:35:27	1.105	89393.	8028.	16366.	0.4	-.1287	256.
7:35:28	1.100	88181.	8003.	16379.	0.9	-.2403	255.
7:35:29	1.092	86976.	7976.	16403.	1.5	-.2939	255.
7:35:30	1.084	85781.	7948.	16440.	2.1	-.2926	255.
7:35:31	1.076	84596.	7921.	16488.	2.6	-.2354	255.
7:35:32	1.071	83419.	7895.	16547.	3.1	-.1047	255.
7:35:33	1.070	82245.	7869.	16612.	3.3	0.0037	255.
7:35:34	1.071	81072.	7843.	16679.	3.4	0.0320	255.
7:35:35	1.072	79898.	7815.	16748.	3.4	-.0289	255.
7:35:36	1.070	78725.	7787.	16816.	3.4	-.1645	255.
7:35:37	1.063	77558.	7759.	16884.	3.4	-.3209	255.
7:35:38	1.052	76400.	7731.	16952.	3.4	-.4534	255.
7:35:39	1.038	75257.	7704.	17018.	3.3	-.5270	255.
7:35:40	1.023	74130.	7678.	17082.	3.2	-.5165	255.
7:35:41	1.010	73019.	7653.	17142.	3.0	-.4323	255.
7:35:42	0.999	71922.	7628.	17196.	2.7	-.3316	255.
7:35:43	0.990	70835.	7602.	17245.	2.5	-.2839	255.
7:35:44	0.983	69757.	7574.	17288.	2.3	-.2754	255.
7:35:45	0.975	68688.	7545.	17329.	2.2	-.2666	255.
7:35:46	0.968	67628.	7512.	17370.	2.2	-.2579	255.
7:35:47	0.961	66576.	7475.	17412.	2.4	-.2467	254.
7:35:48	0.954	65533.	7435.	17456.	2.5	-.2173	254.
7:35:49	0.948	64497.	7391.	17503.	2.6	-.1987	254.
7:35:50	0.943	63467.	7343.	17550.	2.6	-.2096	254.
7:35:51	0.937	62444.	7292.	17596.	2.5	-.2147	254.
7:35:52	0.931	61428.	7239.	17639.	2.3	-.1967	254.
7:35:53	0.926	60419.	7186.	17677.	2.1	-.1761	253.
7:35:54	0.922	59414.	7133.	17712.	1.9	-.1675	253.
7:35:55	0.917	58415.	7079.	17742.	1.6	-.1660	253.

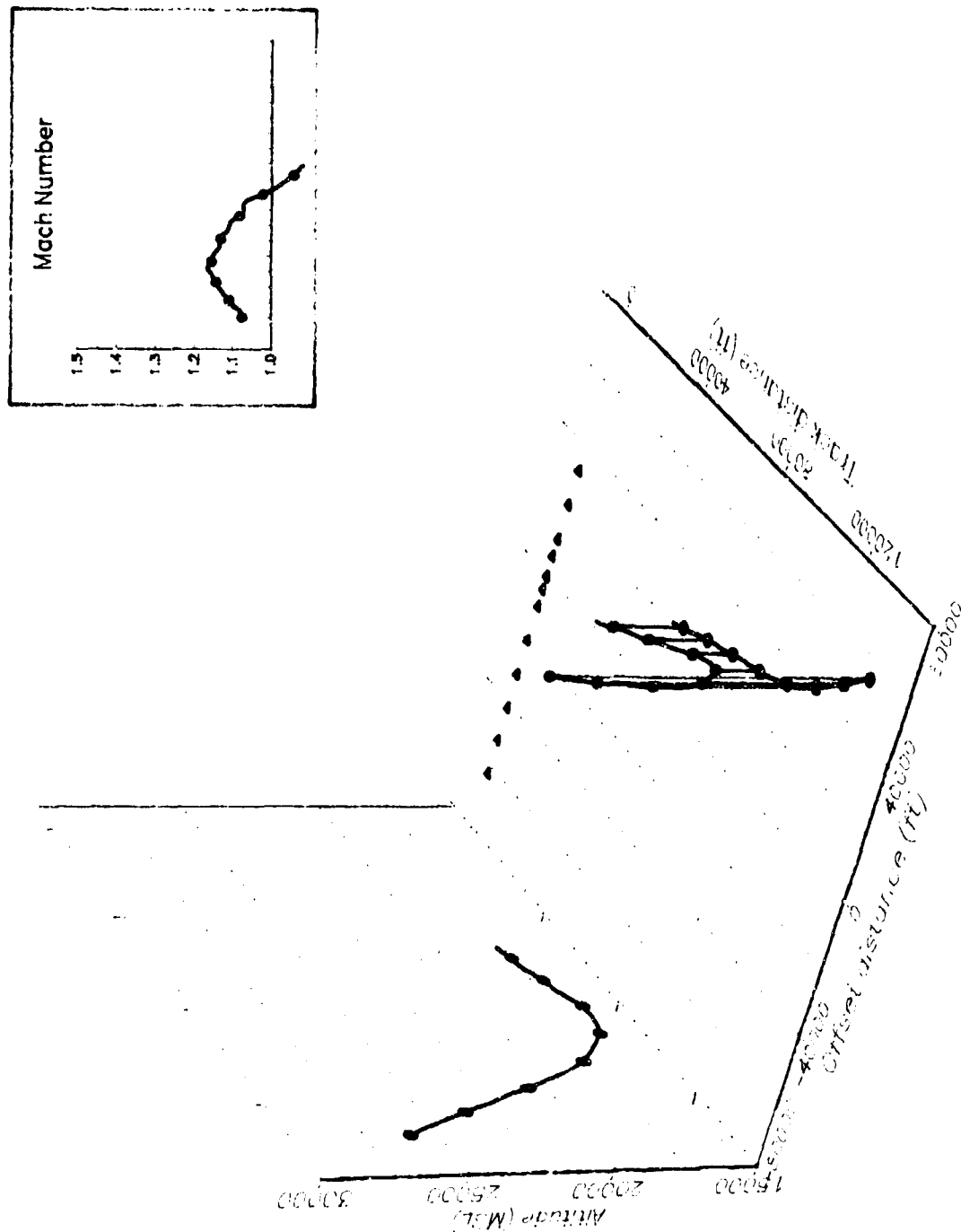


Figure B-12. AT-38 on 4 Aug 67 at 0736

AT-38 AT 1.2M AT 30.3K MSL  
BOOM AT SITE 00 AT 0914 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:11:50	1.009	148093.	-309.	39873.	-8.6	0.1588	261.
9:11:51	1.014	147112.	-245.	39720.	-8.9	0.1596	261.
9:11:52	1.019	146128.	-181.	39562.	-9.2	0.1608	261.
9:11:53	1.024	145139.	-115.	39398.	-9.5	0.1630	261.
9:11:54	1.029	144145.	-47.	39229.	-9.7	0.1708	261.
9:11:55	1.035	143147.	21.	39055.	-9.9	0.1907	261.
9:11:56	1.041	142144.	90.	38877.	-10.0	0.2230	261.
9:11:57	1.047	141133.	160.	38696.	-10.1	0.2574	261.
9:11:58	1.055	140115.	231.	38512.	-10.2	0.2763	261.
9:11:59	1.063	139089.	304.	38326.	-10.2	0.2655	261.
9:12:00	1.070	138054.	377.	38138.	-10.2	0.2200	261.
9:12:01	1.075	137013.	453.	37948.	-10.3	0.1419	261.
9:12:02	1.077	135968.	532.	37755.	-10.4	0.0425	261.
9:12:03	1.076	134923.	616.	37560.	-10.5	-.0550	262.
9:12:04	1.072	133879.	704.	37363.	-10.7	-.1126	262.
9:12:05	1.067	132840.	795.	37163.	-10.9	-.0807	262.
9:12:06	1.066	131804.	886.	36960.	-11.0	0.0840	262.
9:12:07	1.072	130765.	973.	36754.	-11.2	0.3824	261.
9:12:08	1.088	129714.	1048.	36543.	-11.3	0.7053	260.
9:12:09	1.113	128640.	1105.	36327.	-11.3	0.8327	259.
9:12:10	1.136	127541.	1140.	36105.	-11.3	0.6387	258.
9:12:11	1.150	126420.	1149.	35879.	-11.3	0.3177	256.
9:12:12	1.154	125290.	1133.	35650.	-11.3	0.0610	255.
9:12:13	1.152	124159.	1093.	35421.	-11.4	-.0653	254.
9:12:14	1.148	123030.	1030.	35192.	-11.3	-.0733	253.
9:12:15	1.144	121905.	947.	34964.	-11.3	-.0157	252.
9:12:16	1.142	120782.	845.	34738.	-11.2	0.0621	251.
9:12:17	1.143	119658.	726.	34513.	-11.1	0.1323	250.
9:12:18	1.145	118533.	591.	34290.	-11.0	0.1790	249.
9:12:19	1.149	117403.	444.	34067.	-10.9	0.1945	249.
9:12:20	1.153	116268.	286.	33847.	-10.8	0.1835	248.
9:12:21	1.156	115128.	122.	33628.	-10.6	0.1570	248.
9:12:22	1.158	113983.	-47.	33412.	-10.5	0.1270	248.
9:12:23	1.160	112833.	-218.	33198.	-10.3	0.1068	248.
9:12:24	1.162	111679.	-387.	32986.	-10.2	0.1041	248.
9:12:25	1.164	110522.	-553.	32776.	-10.1	0.1117	248.
9:12:26	1.166	109359.	-712.	32567.	-10.0	0.1086	249.
9:12:27	1.168	108190.	-862.	32361.	-9.8	0.1007	249.
9:12:28	1.170	107016.	-999.	32158.	-9.6	0.1025	250.
9:12:29	1.173	105836.	-1120.	31959.	-9.3	0.1122	251.
9:12:30	1.175	104650.	-1223.	31766.	-8.9	0.1133	252.

(CONTINUED)

AT-38 AT 1.2M AT 30.3K MSL  
BOOM AT SITE 00 AT 0914 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:12:31	1.178	103456.	-1308.	31583.	-8.4	0.1062	253.
9:12:32	1.181	102256.	-1377.	31413.	-7.7	0.1041	254.
9:12:33	1.183	101050.	-1433.	31256.	-7.0	0.1138	254.
9:12:34	1.186	99838.	-1477.	31114.	-6.3	0.1188	255.
9:12:35	1.189	98620.	-1514.	30986.	-5.6	0.1010	255.
9:12:36	1.191	97398.	-1547.	30872.	-5.0	0.0528	255.
9:12:37	1.191	96173.	-1580.	30771.	-4.4	-.0173	255.
9:12:38	1.189	94948.	-1616.	30682.	-3.9	-.0788	255.
9:12:39	1.186	93724.	-1656.	30603.	-3.5	-.1077	255.
9:12:40	1.182	92504.	-1700.	30531.	-3.2	-.1042	254.
9:12:41	1.179	91287.	-1745.	30465.	-2.9	-.0795	254.
9:12:42	1.177	90072.	-1791.	30406.	-2.6	-.0466	254.
9:12:43	1.176	88858.	-1835.	30353.	-2.3	-.0127	254.
9:12:44	1.175	87644.	-1878.	30310.	-1.8	0.0175	255.
9:12:45	1.176	86429.	-1918.	30277.	-1.3	0.0425	255.
9:12:46	1.178	85213.	-1957.	30256.	-0.7	0.0475	255.
9:12:47	1.179	83995.	-1996.	30246.	-0.2	0.0123	255.
9:12:48	1.178	82777.	-2035.	30246.	0.2	-.0494	255.
9:12:49	1.176	81561.	-2074.	30252.	0.4	-.1117	255.
9:12:50	1.172	80348.	-2112.	30262.	0.5	-.1527	255.
9:12:51	1.167	79139.	-2147.	30272.	0.4	-.1616	255.
9:12:52	1.162	77936.	-2180.	30279.	0.3	-.1403	255.
9:12:53	1.158	76737.	-2209.	30283.	0.2	-.0986	255.
9:12:54	1.156	75541.	-2237.	30285.	0.0	-.0456	255.
9:12:55	1.156	74346.	-2263.	30285.	-0.1	0.0110	255.
9:12:56	1.156	73151.	-2291.	30281.	-0.3	0.0555	255.
9:12:57	1.158	71955.	-2320.	30273.	-0.5	0.0661	255.
9:12:58	1.160	70756.	-2351.	30261.	-0.7	0.0341	255.
9:12:59	1.160	69557.	-2381.	30245.	-0.8	-.0208	255.
9:13:00	1.159	68358.	-2410.	30227.	-0.8	-.0650	255.
9:13:01	1.156	67161.	-2437.	30210.	-0.8	-.0760	255.
9:13:02	1.154	65966.	-2461.	30196.	-0.6	-.0574	255.
9:13:03	1.153	64773.	-2484.	30187.	-0.3	-.0308	256.
9:13:04	1.152	63581.	-2506.	30184.	0.0	-.0078	256.
9:13:05	1.152	62390.	-2528.	30188.	0.3	0.0038	256.
9:13:06	1.152	61198.	-2550.	30198.	0.6	-.0123	256.
9:13:07	1.151	60007.	-2571.	30211.	0.7	-.0512	256.
9:13:08	1.149	58817.	-2591.	30227.	0.7	-.0899	256.
9:13:09	1.146	57630.	-2610.	30242.	0.7	-.1081	256.
9:13:10	1.143	56477.	-2626.	30256.	0.7	-.0969	256.
9:13:11	1.140	55266.	-2641.	30270.	0.7	-.0736	256.

(CONTINUED)



AT-38 AT 1.2M AT 30.3K MSL  
BOOM AT SITE 00 AT 0914 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:13:12	1.138	54088.	-2655.	30284.	0.6	-.0673	256.
9:13:13	1.136	52913.	-2668.	30294.	0.4	-.0601	256.
9:13:14	1.135	51739.	-2680.	30301.	0.2	-.0476	256.
9:13:15	1.134	50566.	-2692.	30303.	0.0	-.0248	256.
9:13:16	1.133	49394.	-2702.	30301.	-0.2	0.0006	256.
9:13:17	1.133	48223.	-2711.	30296.	-0.3	0.0124	256.
9:13:18	1.134	47051.	-2719.	30288.	-0.4	0.0097	256.
9:13:19	1.134	45878.	-2726.	30278.	-0.5	0.0034	256.
9:13:20	1.134	44706.	-2733.	30267.	-0.5	-.0061	256.
9:13:21	1.133	43533.	-2739.	30257.	-0.5	-.0240	256.
9:13:22	1.132	42362.	-2744.	30249.	-0.4	-.0479	256.
9:13:23	1.130	41192.	-2747.	30241.	-0.4	-.0711	257.
9:13:24	1.128	40024.	-2749.	30232.	-0.5	-.0889	257.
9:13:25	1.125	38859.	-2750.	30222.	-0.5	-.0853	257.
9:13:26	1.123	37697.	-2750.	30211.	-0.5	-.0478	257.
9:13:27	1.122	36536.	-2750.	30202.	-0.3	0.0032	257.
9:13:28	1.123	35375.	-2750.	30198.	-0.1	0.0291	257.
9:13:29	1.124	34213.	-2749.	30196.	0.0	0.0200	257.
9:13:30	1.124	33051.	-2746.	30196.	0.0	-.0034	257.
9:13:31	1.123	31888.	-2743.	30196.	-0.1	-.0181	257.
9:13:32	1.123	30727.	-2740.	30194.	-0.1	-.0219	257.
9:13:33	1.122	29566.	-2735.	30191.	-0.2	-.0285	257.
9:13:34	1.121	28406.	-2730.	30187.	-0.2	-.0361	257.
9:13:35	1.120	27247.	-2723.	30184.	-0.1	-.0370	257.
9:13:36	1.119	26089.	-2715.	30184.	0.1	-.0420	257.
9:13:37	1.117	24932.	-2707.	30188.	0.3	-.0498	257.
9:13:38	1.116	23777.	-2698.	30195.	0.4	-.0559	257.
9:13:39	1.114	22624.	-2688.	30206.	0.6	-.0592	257.
9:13:40	1.112	21473.	-2677.	30220.	0.8	-.0535	257.
9:13:41	1.111	20324.	-2664.	30236.	0.9	-.0356	257.
9:13:42	1.110	19176.	-2651.	30254.	1.0	-.0144	257.
9:13:43	1.110	18028.	-2637.	30274.	1.0	0.0022	257.
9:13:44	1.110	16880.	-2622.	30294.	1.0	0.0102	257.
9:13:45	1.111	15732.	-2608.	30314.	1.0	0.0033	257.
9:13:46	1.111	14584.	-2595.	30334.	0.9	-.0257	257.
9:13:47	1.109	13437.	-2582.	30352.	0.9	-.0762	257.
9:13:48	1.106	12292.	-2569.	30370.	0.9	-.1393	257.
9:13:49	1.101	11152.	-2553.	30387.	0.8	-.1963	258.
9:13:50	1.095	10018.	-2527.	30401.	0.7	-.2267	258.
9:13:51	1.088	8891.	-2484.	30412.	0.4	-.2153	260.
9:13:52	1.082	7772.	-2416.	30418.	0.1	-.1678	261.

(CONTINUED)

AT-38 AT 1.2M AT 30.3K MSL  
BOOM AT SITE 00 AT 0914 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:13:53	1.078	6662.	-2315.	30415.	-0.4	-.1067	263.
9:13:54	1.076	5559.	-2178.	30404.	-0.8	-.0503	265.
9:13:55	1.075	4463.	-2003.	30383.	-1.3	-.0008	267.

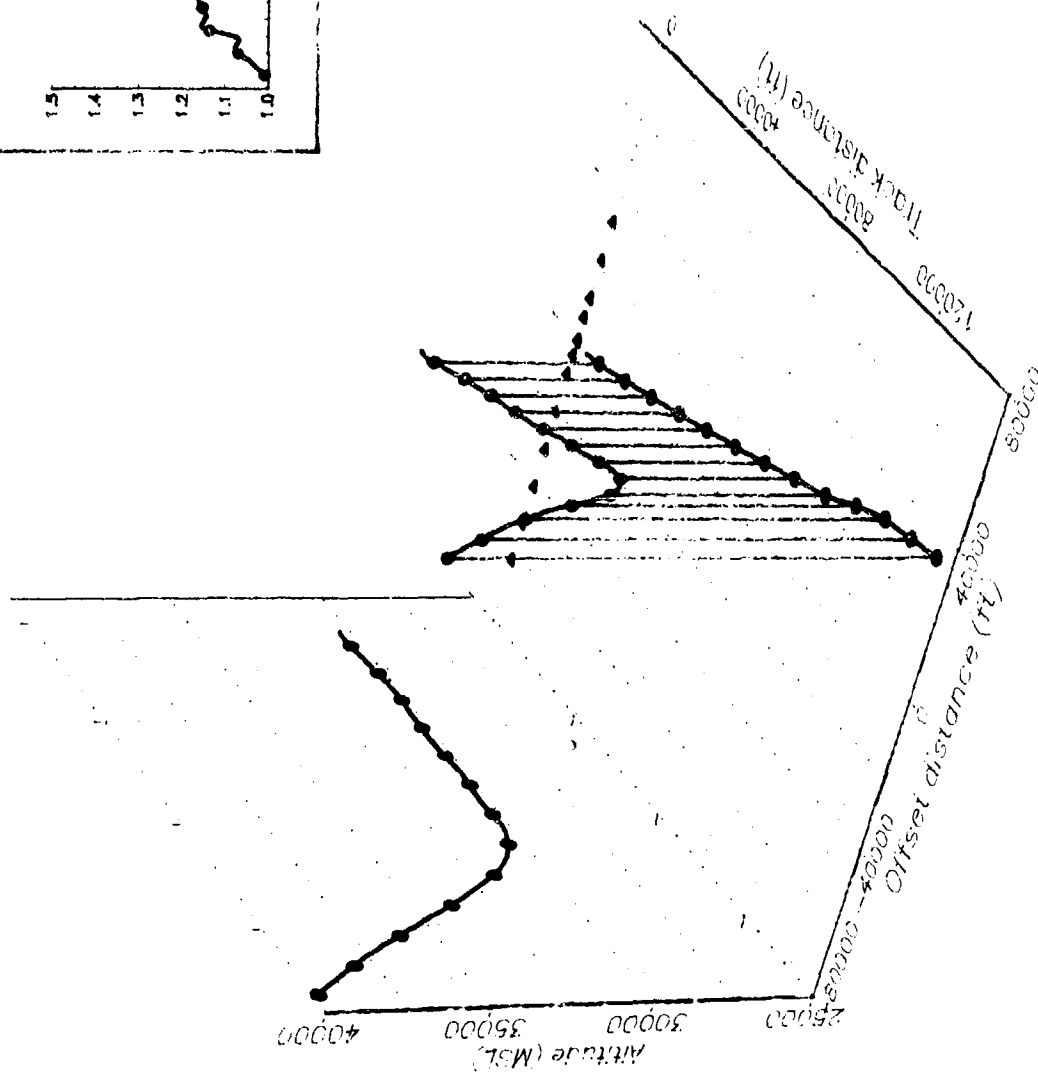
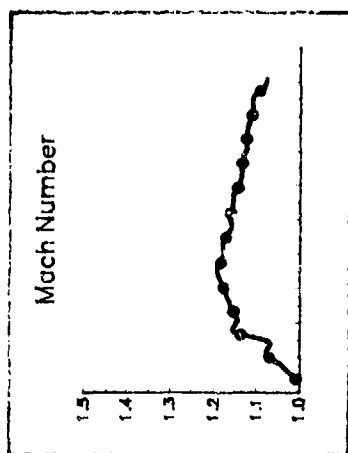


Figure B-13. AT-38 on 4 Aug 87 at 0914

AT-38 AT 1.1M AT 14K MSL  
BOOM AT SITE 00 AT 0923 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:21:10	1.169	147266.	1562.	24283.	-18.7	-.0059	263.
9:21:11	1.167	146093.	1661.	23890.	-18.4	0.0419	261.
9:21:12	1.166	144915.	1720.	23502.	-18.1	0.0907	259.
9:21:13	1.168	143730.	1740.	23119.	-17.8	0.1362	257.
9:21:14	1.171	142540.	1721.	22742.	-17.5	0.1707	255.
9:21:15	1.174	141343.	1669.	22370.	-17.2	0.1870	253.
9:21:16	1.178	140141.	1591.	22002.	-16.9	0.1860	252.
9:21:17	1.181	138933.	1492.	21639.	-16.7	0.1724	251.
9:21:18	1.183	137719.	1382.	21279.	-16.4	0.1540	251.
9:21:19	1.186	136500.	1267.	20922.	-16.3	0.1394	251.
9:21:20	1.189	135276.	1151.	20567.	-16.1	0.1269	251.
9:21:21	1.192	134046.	1038.	20216.	-15.9	0.1130	251.
9:21:22	1.194	132811.	929.	19867.	-15.7	0.0977	251.
9:21:23	1.195	131572.	823.	19523.	-15.4	0.0817	252.
9:21:24	1.197	130328.	720.	19185.	-15.1	0.0639	252.
9:21:25	1.199	129079.	620.	18855.	-14.6	0.0428	252.
9:21:26	1.198	127827.	520.	18534.	-14.1	0.0190	252.
9:21:27	1.196	126570.	422.	18225.	-13.5	0.0009	252.
9:21:28	1.194	125311.	325.	17929.	-12.9	0.0001	252.
9:21:29	1.190	123289.	171.	17486.	-11.9	0.0169	252.
9:21:30	1.188	122021.	77.	17228.	-11.2	0.0122	252.
9:21:31	1.186	120749.	-16.	16986.	-10.5	-.0150	252.
9:21:32	1.183	119474.	-105.	16761.	-9.7	-.0597	252.
9:21:33	1.179	118198.	-192.	16554.	-8.9	-.1039	253.
9:21:34	1.175	116923.	-277.	16365.	-8.1	-.1300	253.
9:21:35	1.170	115649.	-358.	16194.	-7.3	-.1329	253.
9:21:36	1.165	114377.	-438.	16040.	-6.6	-.1256	253.
9:21:37	1.161	113107.	-517.	15901.	-6.0	-.1154	253.
9:21:38	1.156	111840.	-595.	15774.	-5.6	-.1022	253.
9:21:39	1.153	110575.	-673.	15656.	-5.2	-.0855	253.
9:21:40	1.150	109312.	-750.	15544.	-5.0	-.0630	252.
9:21:41	1.148	108052.	-826.	15435.	-5.0	-.0391	253.
9:21:42	1.146	106792.	-900.	15325.	-5.1	-.0264	253.
9:21:43	1.145	105534.	-972.	15213.	-5.3	-.0387	253.
9:21:44	1.142	104276.	-1041.	15096.	-5.5	-.0848	253.
9:21:45	1.138	103022.	-1108.	14973.	-5.8	-.1601	254.
9:21:46	1.131	101774.	-1172.	14845.	-6.0	-.2384	254.
9:21:47	1.123	100533.	-1233.	14712.	-6.2	-.2744	254.
9:21:48	1.114	99301.	-1293.	14579.	-6.2	-.2447	254.
9:21:49	1.107	98077.	-1351.	14448.	-6.1	-.1676	254.
9:21:50	1.103	96857.	-1406.	14324.	-5.7	-.0833	254.

(CONTINUED)

AT-38 AT 1.1M AT 14K MSL  
BOOM AT SITE 00 AT 0923 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:21:51	1.101	95638.	-1457.	14210.	-5.1	-.0330	254.
9:21:52	1.099	94420.	-1504.	14111.	-4.3	-.0439	254.
9:21:53	1.097	93201.	-1547.	14028.	-3.5	-.0990	255.
9:21:54	1.093	91985.	-1588.	13962.	-2.8	-.1468	255.
9:21:55	1.088	90773.	-1628.	13912.	-2.1	-.1628	255.
9:21:56	1.083	89565.	-1668.	13876.	-1.5	-.1645	255.
9:21:57	1.079	88362.	-1706.	13851.	-0.9	-.1652	255.
9:21:58	1.074	87165.	-1742.	13836.	-0.5	-.1678	255.
9:21:59	1.069	85972.	-1776.	13832.	0.0	-.1717	255.
9:22:00	1.064	84785.	-1809.	13837.	0.5	-.1708	255.
9:22:01	1.059	83604.	-1841.	13851.	0.9	-.1587	255.
9:22:02	1.055	82428.	-1874.	13873.	1.3	-.1377	255.
9:22:03	1.051	81256.	-1907.	13902.	1.6	-.1163	255.
9:22:04	1.048	80088.	-1939.	13936.	1.8	-.1071	255.
9:22:05	1.045	78924.	-1970.	13972.	1.8	-.1169	255.
9:22:06	1.041	77764.	-1999.	14009.	1.8	-.1378	255.
9:22:07	1.037	76608.	-2026.	14043.	1.6	-.1541	255.
9:22:08	1.033	75456.	-2052.	14073.	1.4	-.1553	255.
9:22:09	1.028	74309.	-2077.	14097.	1.0	-.1394	255.
9:22:10	1.025	73167.	-2101.	14114.	0.6	-.1119	255.
9:22:11	1.022	72028.	-2124.	14123.	0.2	-.0821	255.
9:22:12	1.020	70891.	-2145.	14123.	-0.1	-.0582	256.
9:22:13	1.018	69757.	-2165.	14118.	-0.4	-.0448	256.
9:22:14	1.017	68624.	-2183.	14109.	-0.5	-.0416	256.
9:22:15	1.016	67492.	-2200.	14099.	-0.5	-.0433	256.
9:22:16	1.015	66361.	-2216.	14091.	-0.3	-.0441	256.
9:22:17	1.013	65232.	-2231.	14089.	0.0	-.0428	256.
9:22:18	1.012	64104.	-2246.	14093.	0.4	-.0429	256.
9:22:19	1.011	62978.	-2261.	14104.	0.8	-.0491	256.
9:22:20	1.009	61853.	-2274.	14123.	1.1	-.0653	256.
9:22:21	1.007	60731.	-2286.	14146.	1.3	-.0878	256.
9:22:22	1.004	59611.	-2297.	14171.	1.3	-.1002	256.
9:22:23	1.002	58495.	-2308.	14195.	1.1	-.0916	256.
9:22:24	0.999	57381.	-2319.	14214.	0.8	-.0725	256.
9:22:25	0.998	56269.	-2330.	14225.	0.3	-.0493	256.
9:22:26	0.996	55159.	-2341.	14224.	-0.4	-.0203	256.
9:22:27	0.996	54050.	-2352.	14211.	-1.0	-.0028	256.
9:22:28	0.996	52941.	-2361.	14188.	-1.4	-.0089	256.
9:22:29	0.995	51832.	-2368.	14157.	-1.7	-.0156	256.
9:22:30	0.995	50724.	-2374.	14124.	-1.8	0.0121	256.
9:22:31	0.996	49615.	-2377.	14091.	-1.6	0.0506	256.

(CONTINUED)

AT-38 AT 1.1M AT 14K MSL

BCOM AT SITE 00 AT 0923 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:22:32	0.997	48505.	-2380.	14063.	-1.3	0.0621	256.
9:22:33	0.999	47393.	-2384.	14041.	-1.0	0.0502	256.
9:22:34	1.000	46279.	-2388.	14024.	-0.7	0.0194	256.
9:22:35	1.000	45164.	-2391.	14013.	-0.5	-.0223	256.
9:22:36	0.999	44050.	-2395.	14003.	-0.5	-.0453	256.
9:22:37	0.998	42938.	-2399.	13994.	-0.5	-.0410	256.
9:22:38	0.997	41826.	-2404.	13984.	-0.6	-.0239	256.
9:22:39	0.996	40716.	-2408.	13971.	-0.7	-.0132	256.
9:22:40	0.996	39606.	-2412.	13959.	-0.6	-.0094	257.
9:22:41	0.995	38496.	-2412.	13949.	-0.4	-.0048	257.
9:22:42	0.995	37386.	-2409.	13944.	-0.1	-.0166	257.
9:22:43	0.994	36277.	-2402.	13944.	0.1	-.0383	257.
9:22:44	0.993	35169.	-2395.	13947.	0.1	-.0376	257.
9:22:45	0.992	34062.	-2390.	13948.	0.0	-.0040	257.
9:22:46	0.993	32956.	-2388.	13946.	-0.2	0.0492	257.
9:22:47	0.995	31847.	-2389.	13939.	-0.5	0.0953	257.
9:22:48	0.998	30736.	-2392.	13926.	-0.8	0.1022	256.
9:22:49	1.000	29622.	-2395.	13910.	-0.9	0.0475	256.
9:22:50	1.000	28507.	-2399.	13892.	-0.9	-.0559	256.
9:22:51	0.997	27393.	-2401.	13875.	-0.8	-.1509	257.
9:22:52	0.992	26283.	-2403.	13860.	-0.7	-.1819	257.
9:22:53	0.987	25180.	-2405.	13847.	-0.6	-.1293	257.
9:22:54	0.985	24080.	-2406.	13837.	-0.5	-.0314	257.
9:22:55	0.985	22981.	-2406.	13829.	-0.4	0.0660	257.
9:22:56	0.988	21881.	-2405.	13823.	-0.3	0.1277	257.
9:22:57	0.992	20776.	-2404.	13818.	-0.2	0.1478	257.
9:22:58	0.997	19667.	-2403.	13815.	-0.1	0.1464	257.
9:22:59	1.001	18553.	-2403.	13813.	0.0	0.1445	257.

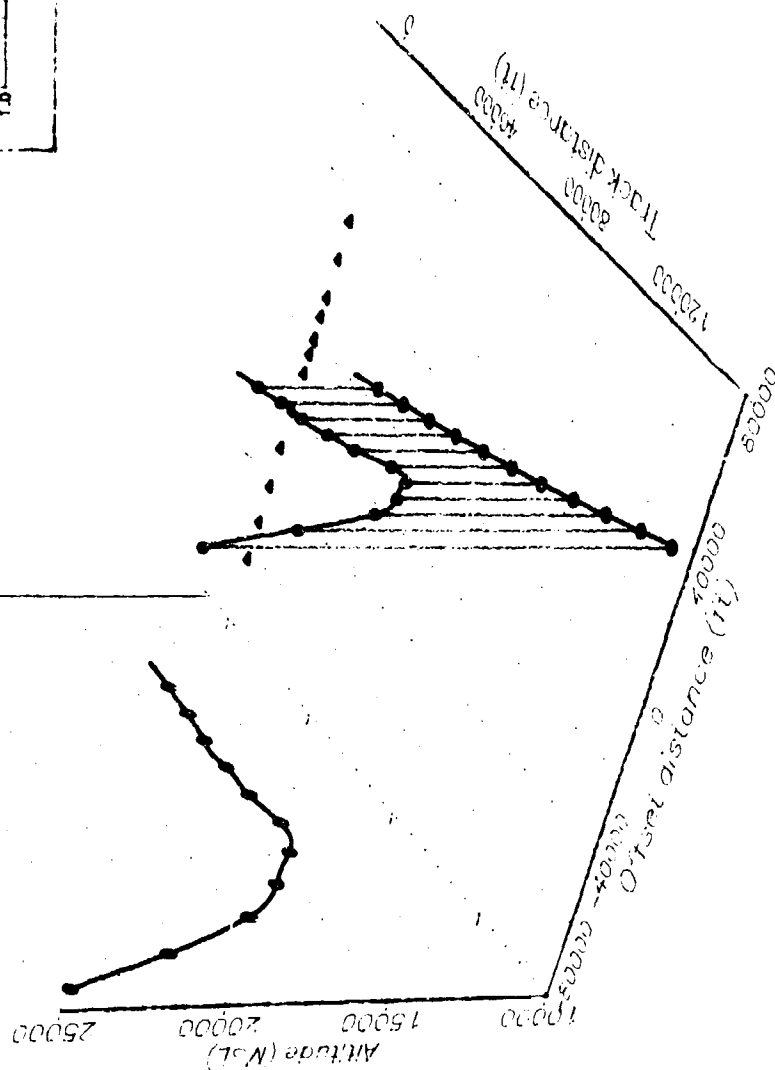
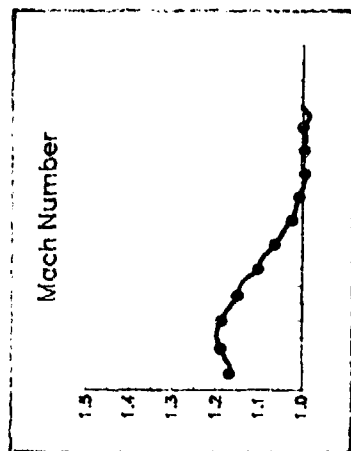


Figure B-14. AT-38 on 4 Aug 57 at 0923

F-15 AT 1.38M AT 41.4K MSL  
BOOM AT SITE 00 AT 0756 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:54:30	1.355	146399.	-4360.	40480.	5.0	-.2382	285.
7:54:31	1.348	145227.	-3772.	40596.	4.9	-.2390	284.
7:54:32	1.340	144056.	-3194.	40710.	4.8	-.2465	284.
7:54:33	1.333	142889.	-2627.	40820.	4.8	-.2164	284.
7:54:34	1.327	141723.	-2073.	40929.	4.7	-.1367	283.
7:54:35	1.324	140553.	-1533.	41034.	4.6	-.0642	282.
7:54:36	1.322	139377.	-1011.	41136.	4.4	-.0285	281.
7:54:37	1.322	138192.	-509.	41235.	4.3	-.0137	280.
7:54:38	1.322	136997.	-31.	41331.	4.1	-.0153	279.
7:54:39	1.321	135791.	423.	41422.	3.9	-.0269	278.
7:54:40	1.320	134576.	852.	41509.	3.7	-.0221	276.
7:54:41	1.320	133352.	1256.	41588.	3.3	-.0136	275.
7:54:42	1.320	132119.	1636.	41660.	2.9	-.0056	274.
7:54:43	1.320	130879.	1993.	41721.	2.4	0.0089	273.
7:54:44	1.320	129631.	2327.	41770.	1.9	0.0241	272.
7:54:45	1.321	128375.	2638.	41807.	1.3	0.0169	271.
7:54:46	1.321	127111.	2924.	41830.	0.7	-.0029	269.
7:54:47	1.321	125842.	3185.	41839.	0.1	-.0110	268.
7:54:48	1.321	124567.	3419.	41834.	-0.5	0.0090	267.
7:54:49	1.322	123286.	3624.	41816.	-1.1	0.0435	266.
7:54:50	1.324	121999.	3800.	41784.	-1.7	0.0820	264.
7:54:51	1.327	120707.	3947.	41740.	-2.1	0.1038	263.
7:54:52	1.330	119408.	4069.	41688.	-2.4	0.1043	262.
7:54:53	1.333	118105.	4169.	41630.	-2.5	0.0912	261.
7:54:54	1.336	116797.	4253.	41572.	-2.4	0.0631	260.
7:54:55	1.337	115487.	4326.	41518.	-2.2	0.0416	260.
7:54:56	1.338	114175.	4394.	41473.	-1.7	0.0249	260.
7:54:57	1.339	112861.	4459.	41438.	-1.2	0.0319	260.
7:54:58	1.341	111546.	4523.	41418.	-0.5	0.0726	260.
7:54:59	1.344	110229.	4588.	41413.	0.1	0.0897	260.
7:55:00	1.346	108909.	4654.	41422.	0.6	0.0422	260.
7:55:01	1.346	107588.	4719.	41441.	1.0	-.0062	260.
7:55:02	1.346	106267.	4785.	41469.	1.3	-.0126	260.
7:55:03	1.346	104947.	4851.	41499.	1.3	0.0090	260.
7:55:04	1.346	103626.	4917.	41528.	1.2	0.0178	260.
7:55:05	1.347	102305.	4983.	41553.	0.9	0.0032	260.
7:55:06	1.347	100984.	5049.	41570.	0.6	-.0286	260.
7:55:07	1.345	99663.	5116.	41578.	0.2	-.0337	260.
7:55:08	1.344	98343.	5184.	41578.	-0.2	-.0266	260.
7:55:09	1.344	97024.	5254.	41569.	-0.5	0.0028	260.
7:55:10	1.345	95706.	5326.	41554.	-0.8	0.0539	260.

(CONTINUED)



F-15 AT 1.38M AT 41.4K MSL  
BOOM AT SITE 00 AT 0756 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:55:11	1.347	94385.	5398.	41532.	-1.0	0.1022	260.
7:55:12	1.351	93062.	5469.	41507.	-1.1	0.1045	260.
7:55:13	1.354	91735.	5540.	41481.	-1.1	0.0682	260.
7:55:14	1.355	90406.	5610.	41456.	-1.0	0.0263	260.
7:55:15	1.355	89076.	5680.	41434.	-0.8	-0.0046	260.
7:55:16	1.355	87746.	5750.	41417.	-0.6	-0.0190	260.
7:55:17	1.354	86416.	5822.	41405.	-0.4	-0.0102	260.
7:55:18	1.355	85087.	5895.	41399.	-0.2	0.0256	260.
7:55:19	1.356	83757.	5968.	41398.	0.0	0.0503	260.
7:55:20	1.357	82426.	6041.	41401.	0.2	0.0361	260.
7:55:21	1.358	81094.	6113.	41407.	0.3	0.0201	260.
7:55:22	1.359	79760.	6185.	41414.	0.3	0.0261	260.
7:55:23	1.360	78426.	6255.	41421.	0.3	0.0393	260.
7:55:24	1.361	77091.	6324.	41427.	0.2	0.0371	260.
7:55:25	1.362	75754.	6392.	41429.	0.0	0.0108	260.
7:55:26	1.362	74417.	6460.	41427.	-0.1	-0.0191	260.
7:55:27	1.361	73081.	6529.	41422.	-0.3	-0.0236	260.
7:55:28	1.361	71745.	6598.	41415.	-0.3	0.0030	260.
7:55:29	1.362	70409.	6667.	41407.	-0.4	0.0476	260.
7:55:30	1.364	69072.	6735.	41397.	-0.4	0.0747	260.
7:55:31	1.366	67732.	6803.	41388.	-0.4	0.0449	260.
7:55:32	1.366	66391.	6871.	41379.	-0.3	-0.0200	260.
7:55:33	1.365	65051.	6938.	41372.	-0.2	-0.0587	260.
7:55:34	1.363	63712.	7005.	41368.	-0.1	-0.0344	260.
7:55:35	1.363	62374.	7072.	41365.	0.0	0.0044	260.
7:55:36	1.363	61036.	7138.	41366.	0.1	0.0222	260.
7:55:37	1.364	59698.	7204.	41369.	0.2	0.0377	260.
7:55:38	1.365	58358.	7269.	41374.	0.3	0.0508	260.
7:55:39	1.367	57017.	7335.	41381.	0.3	0.0326	260.
7:55:40	1.367	55674.	7400.	41388.	0.3	-0.0135	260.
7:55:41	1.367	54333.	7467.	41395.	0.3	-0.0222	260.
7:55:42	1.367	52991.	7533.	41402.	0.3	0.0224	260.
7:55:43	1.368	51649.	7599.	41408.	0.2	0.0605	260.
7:55:44	1.370	50305.	7662.	41412.	0.1	0.0414	259.
7:55:45	1.370	48960.	7725.	41414.	0.1	-0.0026	259.
7:55:46	1.370	47615.	7787.	41415.	0.1	-0.0244	259.
7:55:47	1.369	46270.	7850.	41416.	0.1	-0.0206	260.
7:55:48	1.369	44926.	7915.	41418.	0.1	0.0013	260.
7:55:49	1.369	43583.	7982.	41419.	0.0	0.0176	260.
7:55:50	1.370	42239.	8050.	41420.	0.0	0.0206	260.
7:55:51	1.370	40894.	8118.	41421.	0.0	0.0125	260.

(CONTINUED)

F-15 AT 1.38M AT 41.4K MSL  
BOOM AT SITE 00 AT 0756 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:55:52	1.371	39548.	8186.	41421.	0.0	0.0061	260.
7:55:53	1.371	38203.	8253.	41422.	0.0	0.0061	260.
7:55:54	1.371	36857.	8319.	41422.	0.0	0.0034	260.
7:55:55	1.371	35511.	8385.	41423.	0.1	0.0221	260.
7:55:56	1.373	34165.	8450.	41425.	0.0	0.0629	260.
7:55:57	1.375	32816.	8514.	41426.	0.0	0.0746	260.
7:55:58	1.377	31465.	8578.	41426.	0.0	0.0366	259.
7:55:59	1.378	30113.	8641.	41425.	-0.1	0.0046	259.
7:56:00	1.378	28760.	8703.	41423.	-0.1	0.0004	259.

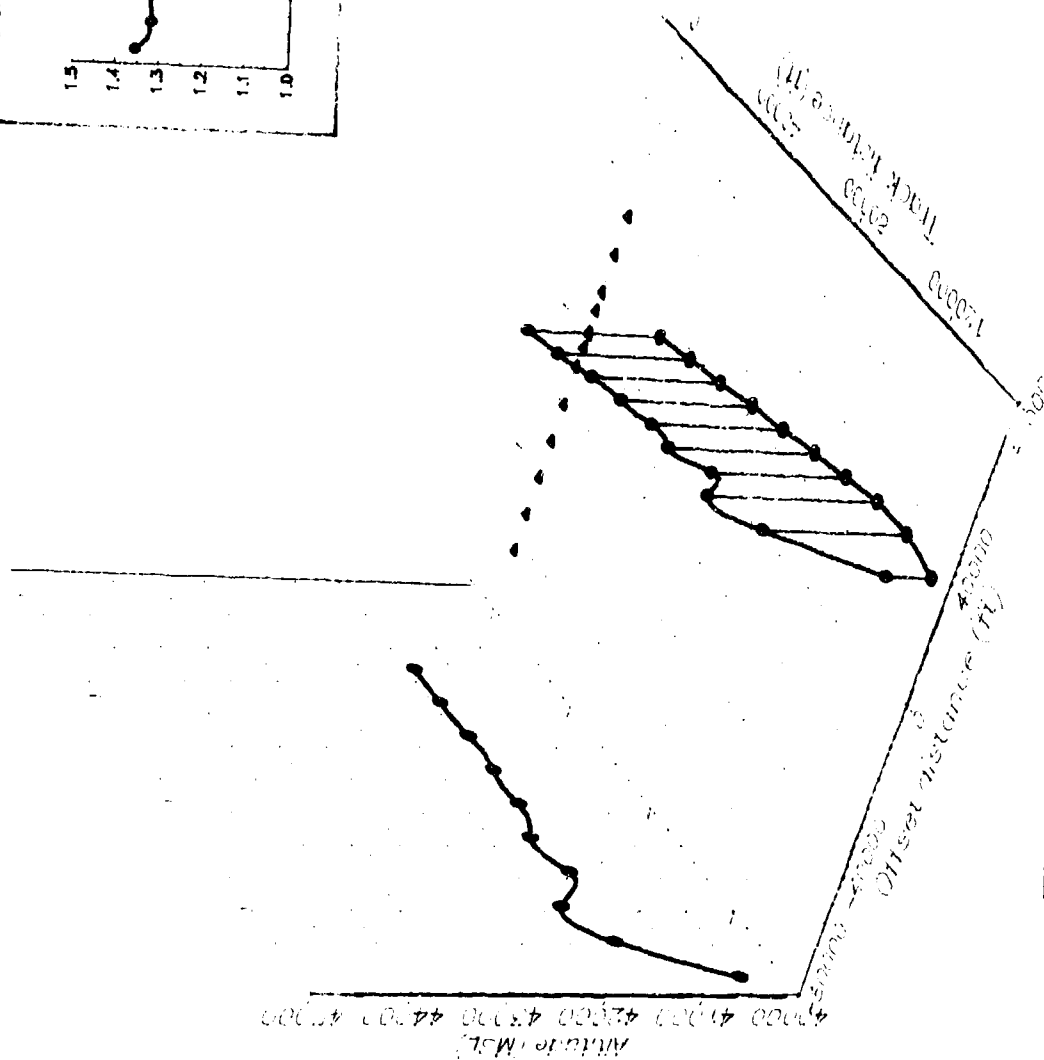
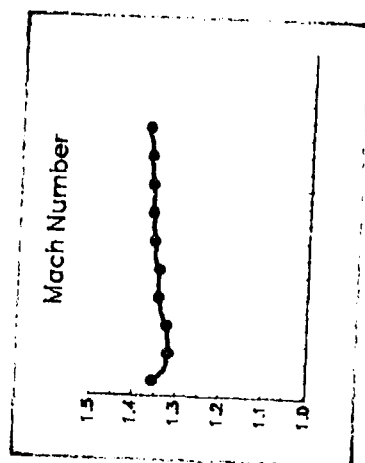


Figure B-15. F-15 on 4 Aug 87 at 0756

F-15 AT 1.2M AT 29.7K MSL  
BOOM AT SITE 00 AT 0804 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:01:57	1.284	149407.	-4692.	33284.	-8.0	0.1382	266.
8:01:58	1.286	148124.	-4497.	33105.	-7.6	0.1335	266.
8:01:59	1.289	146837.	-4296.	32934.	-7.3	0.1008	266.
8:02:00	1.290	145547.	-4089.	32769.	-7.0	0.0487	266.
8:02:01	1.290	144255.	-3876.	32612.	-6.7	0.0048	267.
8:02:02	1.288	142964.	-3660.	32461.	-6.4	-.0205	267.
8:02:03	1.286	141672.	-3442.	32318.	-6.1	-.0405	267.
8:02:04	1.284	140380.	-3226.	32180.	-5.8	-.0466	266.
8:02:05	1.282	139088.	-3019.	32049.	-5.6	-.0379	266.
8:02:06	1.280	137795.	-2824.	31924.	-5.3	-.0122	265.
8:02:07	1.279	136499.	-2645.	31805.	-5.1	0.0143	265.
8:02:08	1.279	135199.	-2482.	31691.	-4.8	0.0190	264.
8:02:09	1.278	133897.	-2336.	31584.	-4.5	0.0016	263.
8:02:10	1.278	132593.	-2200.	31482.	-4.3	-.0238	263.
8:02:11	1.276	131289.	-2071.	31387.	-4.1	-.0383	263.
8:02:12	1.274	129985.	-1942.	31294.	-4.0	-.0458	263.
8:02:13	1.272	128683.	-1811.	31203.	-4.0	-.0467	263.
8:02:14	1.270	127384.	-1673.	31110.	-4.1	-.0367	263.
8:02:15	1.269	126086.	-1531.	31014.	-4.3	-.0170	263.
8:02:16	1.268	124790.	-1383.	30911.	-4.6	-.0111	264.
8:02:17	1.267	123496.	-1233.	30802.	-5.0	-.0055	264.
8:02:18	1.266	122202.	-1084.	30684.	-5.3	-.0045	264.
8:02:19	1.265	120908.	-939.	30562.	-5.4	-.0154	263.
8:02:20	1.264	119614.	-799.	30437.	-5.4	-.0306	263.
8:02:21	1.262	118320.	-667.	30315.	-5.2	-.0297	263.
8:02:22	1.261	117026.	-541.	30202.	-4.7	-.0219	262.
8:02:23	1.260	115731.	-420.	30103.	-3.9	-.0290	262.
8:02:24	1.258	114435.	-301.	30024.	-3.0	-.0392	262.
8:02:25	1.257	113140.	-182.	29966.	-2.1	-.0470	262.
8:02:26	1.255	111845.	-62.	29928.	-1.2	-.0517	262.
8:02:27	1.253	110552.	60.	29908.	-0.6	-.0617	262.
8:02:28	1.251	109262.	183.	29902.	-0.1	-.0978	262.
8:02:29	1.247	107974.	306.	29904.	0.2	-.1546	262.
8:02:30	1.242	106691.	428.	29910.	0.3	-.1491	262.
8:02:31	1.238	105412.	545.	29915.	0.2	-.0742	262.
8:02:32	1.237	104135.	654.	29916.	-0.1	-.0207	262.
8:02:33	1.236	102858.	752.	29909.	-0.5	-.0517	261.
8:02:34	1.234	101581.	837.	29894.	-0.9	-.1019	260.
8:02:35	1.230	100307.	908.	29870.	-1.2	-.1047	260.
8:02:36	1.227	99036.	967.	29841.	-1.3	-.0534	259.
8:02:37	1.226	97766.	1016.	29811.	-1.3	0.0026	259.

(CONTINUED)

F-15 AT 1.2M AT 29.7K MSL  
BOOM AT SITE 00 AT 0804 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:02:38	1.227	96496.	1057.	29785.	-1.0	0.0509	259.
8:02:39	1.229	95224.	1094.	29767.	-0.6	0.0550	258.
8:02:40	1.229	93950.	1130.	29757.	-0.2	-.0037	258.
8:02:41	1.228	92676.	1165.	29757.	0.2	-.0781	258.
8:02:42	1.225	91405.	1201.	29764.	0.4	-.1235	258.
8:02:43	1.221	90138.	1238.	29776.	0.6	-.1301	258.
8:02:44	1.217	88875.	1277.	29790.	0.6	-.1083	259.
8:02:45	1.215	87615.	1315.	29803.	0.6	-.0748	258.
8:02:46	1.213	86358.	1353.	29814.	0.4	-.0520	258.
8:02:47	1.211	85102.	1390.	29821.	0.2	-.0466	258.
8:02:48	1.210	83848.	1425.	29822.	-0.1	-.0490	258.
8:02:49	1.209	82595.	1459.	29818.	-0.3	-.0379	258.
8:02:50	1.208	81344.	1492.	29808.	-0.5	-.0048	258.
8:02:51	1.208	80093.	1525.	29795.	-0.7	0.0260	258.
8:02:52	1.209	78841.	1557.	29779.	-0.7	0.0197	258.
8:02:53	1.209	77588.	1589.	29763.	-0.7	-.0163	258.
8:02:54	1.208	76336.	1621.	29749.	-0.6	-.0521	258.
8:02:55	1.206	75085.	1653.	29736.	-0.5	-.0705	258.
8:02:56	1.204	73837.	1685.	29725.	-0.5	-.0513	258.
8:02:57	1.202	72590.	1719.	29716.	-0.4	-.0205	258.
8:02:58	1.202	71344.	1751.	29706.	-0.4	-.0015	258.
8:02:59	1.202	70098.	1784.	29697.	-0.4	0.0046	258.
8:03:00	1.202	68852.	1816.	29688.	-0.4	-.0072	258.
8:03:01	1.201	67606.	1847.	29680.	-0.3	-.0363	258.
8:03:02	1.200	66361.	1878.	29674.	-0.2	-.0623	258.
8:03:03	1.198	65118.	1909.	29672.	-0.1	-.0709	258.
8:03:04	1.196	63878.	1940.	29672.	0.1	-.0480	258.
8:03:05	1.195	62639.	1971.	29675.	0.2	0.0158	258.
8:03:06	1.196	61399.	2002.	29681.	0.3	0.0536	258.
8:03:07	1.198	60158.	2032.	29688.	0.3	0.0101	258.
8:03:08	1.197	58917.	2061.	29695.	0.3	-.0663	258.
8:03:09	1.194	57677.	2090.	29703.	0.3	-.0864	258.
8:03:10	1.192	56441.	2119.	29710.	0.3	-.0415	258.
8:03:11	1.192	55205.	2148.	29715.	0.2	-.0007	258.
8:03:12	1.192	53970.	2177.	29720.	0.2	0.0013	258.
8:03:13	1.192	52735.	2207.	29724.	0.2	-.0063	258.
8:03:14	1.191	51500.	2236.	29727.	0.1	-.0199	258.
8:03:15	1.191	50265.	2264.	29730.	0.1	-.0285	258.
8:03:16	1.190	49031.	2292.	29731.	0.1	-.0229	258.
8:03:17	1.189	47798.	2319.	29732.	0.0	-.0062	258.
8:03:18	1.189	46566.	2346.	29730.	-0.1	-.0015	258.

(CONTINUED)

F-15 AT 1.2M AT 29.7K MSL  
BOOM AT SITE 00 AT 0804 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:03:19	1.189	45333.	2374.	29725.	-0.3	-.0038	258.
8:03:20	1.189	44100.	2401.	29719.	-0.3	0.0330	258.
8:03:21	1.191	42867.	2430.	29711.	-0.4	0.0691	258.
8:03:22	1.193	41631.	2458.	29702.	-0.4	0.0474	258.
8:03:23	1.193	40394.	2484.	29692.	-0.4	-.0221	258.
8:03:24	1.191	39157.	2511.	29684.	-0.4	-.0879	258.
8:03:25	1.188	37924.	2537.	29677.	-0.3	-.1101	258.
8:03:26	1.185	36693.	2563.	29673.	-0.1	-.0819	258.
8:03:27	1.184	35465.	2590.	29671.	0.0	-.0004	258.
8:03:28	1.185	34237.	2616.	29673.	0.1	0.0617	258.
8:03:29	1.187	33008.	2641.	29675.	0 1	0.0476	258.
8:03:30	1.188	31777.	2666.	29678.	0.1	0.0118	258.
8:03:31	1.188	30545.	2689.	29681.	0.1	-.0082	258.
8:03:32	1.187	29314.	2711.	29683.	0.0	-.0118	258.
8:03:33	1.187	28083.	2732.	29683.	0.0	-.0067	258.
8:03:34	1.187	26852.	2753.	29682.	-0.1	0.0055	258.
8:03:35	1.187	25621.	2773.	29679.	-0.2	0.0130	258.
8:03:36	1.188	24390.	2792.	29675.	-0.2	0.0065	258.
8:03:37	1.188	23158.	2811.	29669.	-0.3	-.0124	258.
8:03:38	1.187	21927.	2829.	29661.	-0.4	-.0302	258.
8:03:39	1.186	20697.	2849.	29652.	-0.5	-.0092	258.
8:03:40	1.186	19467.	2869.	29642.	-0.5	0.0073	258.
8:03:41	1.186	18237.	2889.	29630.	-0.5	-.0135	258.
8:03:42	1.185	17007.	2908.	29618.	-0.6	-.0331	258.
8:03:43	1.184	15779.	2928.	29606.	-0.6	-.0363	258.

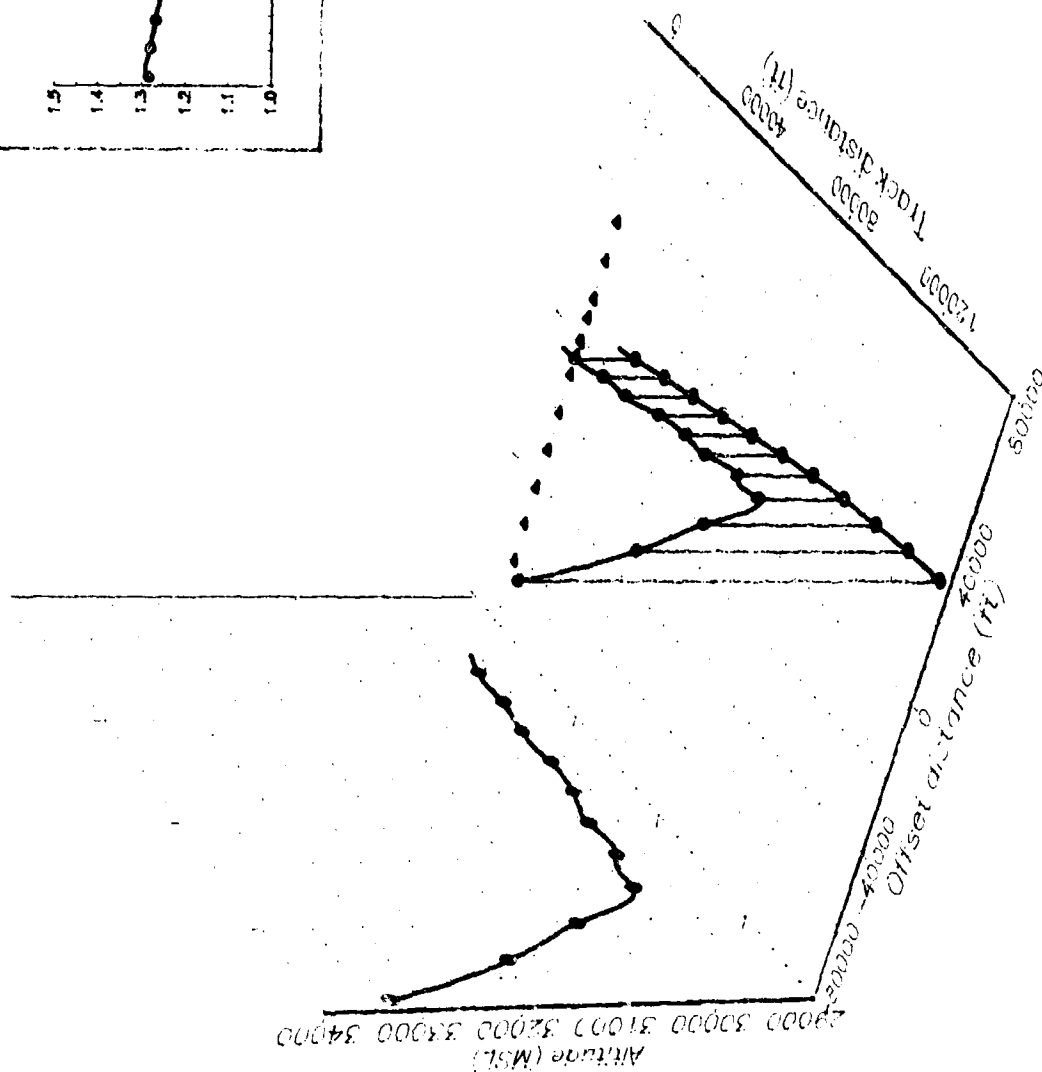
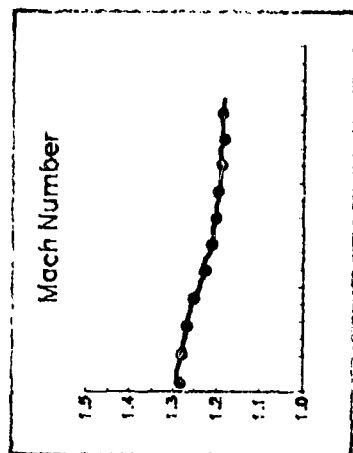


Figure B-16. F-15 on 4 Aug 87 at 0804

F-15 AT 1.1M AT 12.5K MSL  
BOOM AT SITE 00 AT 0810 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCFL (G'S)	HEADING T NORTH (DEG)
8:08:06	1.016	147197.	-13964.	28898.	-13.5	-.1744	310.
8:08:07	1.013	146545.	-13212.	28639.	-14.8	0.0425	305.
8:08:08	1.017	145835.	-12515.	28359.	-15.9	0.2658	300.
8:08:09	1.027	145067.	-11872.	28057.	-16.8	0.4651	296.
8:08:10	1.042	144241.	-11280.	27739.	-17.3	0.5881	292.
8:08:11	1.059	143363.	-10733.	27410.	-17.4	0.5885	288.
8:08:12	1.075	142440.	-10221.	27076.	-17.3	0.4654	286.
8:08:13	1.085	141485.	-9734.	26741.	-17.1	0.3087	284.
8:08:14	1.092	140511.	-9260.	26405.	-17.1	0.2003	284.
8:08:15	1.096	139528.	-8789.	26066.	-17.2	0.1727	283.
8:08:16	1.100	138542.	-8316.	25721.	-17.6	0.2270	284.
8:08:17	1.106	137555.	-7836.	25365.	-18.1	0.3332	284.
8:08:18	1.116	136565.	-7348.	24995.	-18.6	0.4283	284.
8:08:19	1.128	135569.	-6850.	24613.	-19.0	0.4529	285.
8:08:20	1.139	134565.	-6344.	24219.	-19.2	0.4037	285.
8:08:21	1.148	133552.	-5831.	23819.	-19.3	0.3267	285.
8:08:22	1.156	132528.	-5315.	23416.	-19.2	0.2533	285.
8:08:23	1.161	131494.	-4801.	23014.	-18.9	0.1991	284.
8:08:24	1.166	130444.	-4298.	22616.	-18.6	0.1815	283.
8:08:25	1.170	129375.	-3817.	22222.	-18.2	0.1819	281.
8:08:26	1.173	128281.	-3368.	21835.	-17.9	0.1713	279.
8:08:27	1.174	127162.	-2962.	21452.	-17.6	0.1513	276.
8:08:28	1.176	126016.	-2603.	21077.	-17.1	0.1483	274.
8:08:29	1.179	124847.	-2295.	20711.	-16.6	0.1805	271.
8:08:30	1.183	123656.	-2036.	20356.	-15.9	0.1989	268.
8:08:31	1.188	122444.	-1820.	20017.	-15.0	0.1644	266.
8:08:32	1.188	121216.	-1636.	19697.	-14.0	0.0895	265.
8:08:33	1.188	119976.	-1475.	19398.	-13.0	0.0226	264.
8:08:34	1.189	118729.	-1324.	19123.	-11.9	0.0025	264.
8:08:35	1.189	117477.	-1174.	18870.	-11.0	0.0053	264.
8:08:36	1.187	116221.	-1021.	18635.	-10.3	0.0063	264.
8:08:37	1.186	114965.	-860.	18412.	-9.9	-.0194	264.
8:08:38	1.183	113709.	-693.	18194.	-9.9	-.0466	265.
8:08:39	1.180	112455.	-520.	17973.	-10.1	-.0406	265.
8:08:40	1.177	111206.	-344.	17743.	-10.7	-.0105	265.
8:08:41	1.174	109959.	-164.	17499.	-11.4	0.0429	265.
8:08:42	1.174	108715.	17.	17238.	-12.3	0.0938	265.
8:08:43	1.174	107472.	200.	16957.	-13.2	0.0814	265.
8:08:44	1.173	106232.	382.	16656.	-14.1	0.0037	265.
8:08:45	1.170	104996.	561.	16335.	-15.0	-.0316	265.
8:08:46	1.168	103763.	733.	15998.	-15.7	-.0045	265.

(CONTINUED)



F-15 AT 1.1M AT 12.5K MSL  
BOOM AT SITE 00 AT 0810 ON 04 AUG 87

(CONTINUED)

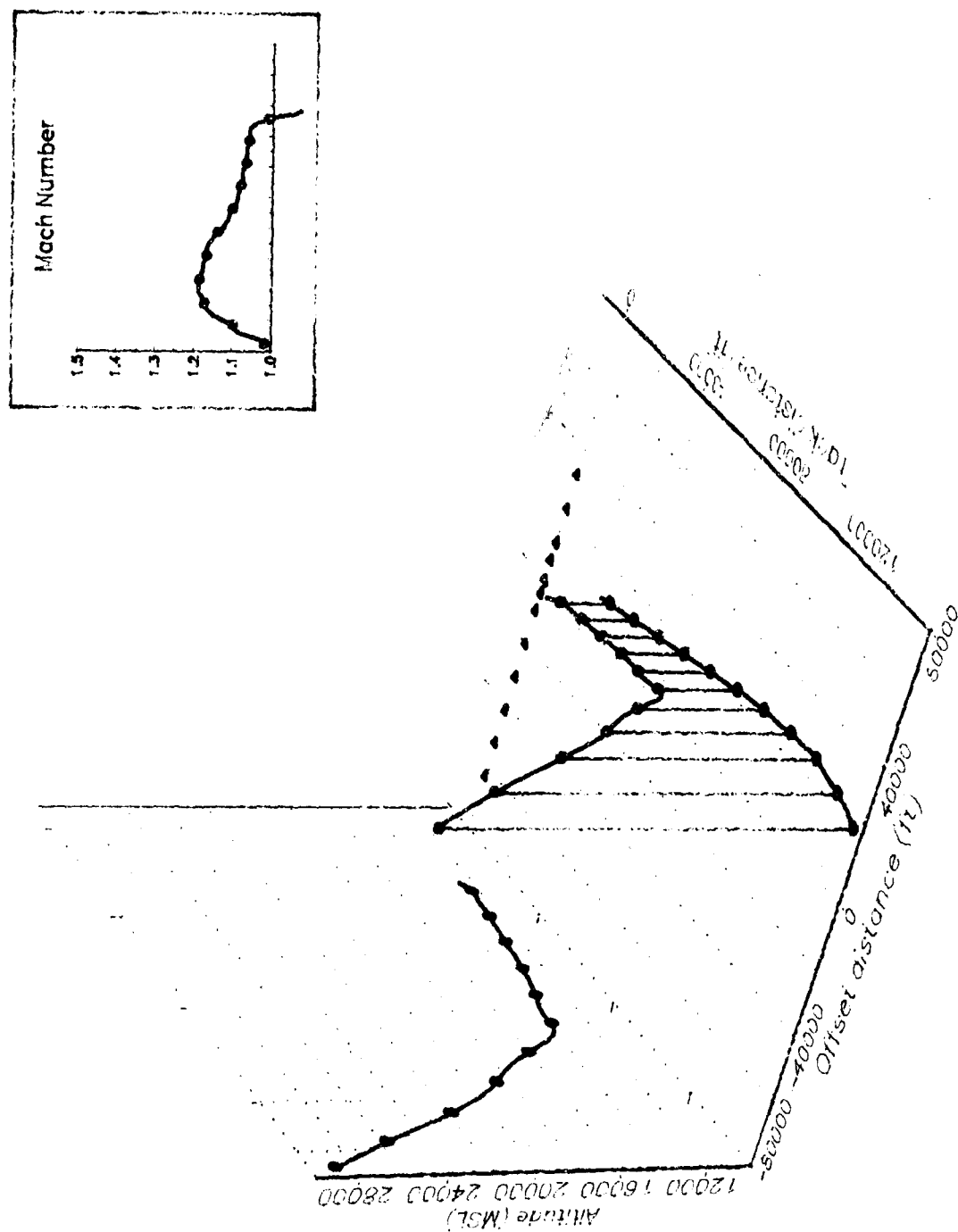
TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:08:47	1.166	102532.	891.	15650.	-16.0	0.0343	264.
8:08:48	1.165	101298.	1029.	15299.	-15.8	0.0624	263.
8:08:49	1.165	100056.	1143.	14959.	-15.0	0.0572	262.
8:08:50	1.165	98805.	1232.	14642.	-13.5	-.0142	260.
8:08:51	1.162	97544.	1300.	14364.	-11.5	-.1044	259.
8:08:52	1.157	96275.	1350.	14137.	-9.0	-.1171	259.
8:08:53	1.154	95000.	1391.	13968.	-6.3	-.0842	258.
8:08:54	1.151	93723.	1428.	13857.	-3.8	-.1040	258.
8:08:55	1.146	92445.	1464.	13798.	-1.8	-.1870	258.
8:08:56	1.140	91172.	1503.	13776.	-0.4	-.2633	259.
8:08:57	1.132	89908.	1545.	13777.	0.2	-.2593	259.
8:08:58	1.125	88651.	1588.	13783.	0.2	-.1773	259.
8:08:59	1.121	87401.	1632.	13783.	-0.3	-.1125	259.
8:09:00	1.118	86154.	1675.	13770.	-1.0	-.1231	259.
8:09:01	1.114	84911.	1716.	13741.	-1.7	-.1446	259.
8:09:02	1.110	83673.	1757.	13697.	-2.3	-.0875	259.
8:09:03	1.109	82438.	1798.	13642.	-2.8	-.0031	259.
8:09:04	1.109	81204.	1838.	13580.	-3.0	-.0241	259.
8:09:05	1.106	79971.	1878.	13516.	-3.0	-.1319	259.
8:09:06	1.101	78742.	1919.	13454.	-2.9	-.1964	259.
8:09:07	1.095	77519.	1960.	13394.	-2.8	-.1679	259.
8:09:08	1.092	76301.	2001.	13337.	-2.6	-.0808	259.
8:09:09	1.090	75086.	2043.	13285.	-2.4	-.0271	259.
8:09:10	1.089	73871.	2086.	13238.	-2.1	-.0388	259.
8:09:11	1.088	72658.	2129.	13196.	-1.9	-.0505	259.
8:09:12	1.086	71446.	2173.	13157.	-1.7	-.0418	259.
8:09:13	1.085	70235.	2217.	13122.	-1.6	-.0350	259.
8:09:14	1.084	69026.	2260.	13090.	-1.5	-.0507	259.
8:09:15	1.082	67818.	2303.	13059.	-1.4	-.0778	259.
8:09:16	1.079	66612.	2346.	13030.	-1.3	-.0832	259.
8:09:17	1.077	65409.	2389.	13003.	-1.2	-.0628	259.
8:09:18	1.076	64208.	2431.	12978.	-1.2	-.0475	259.
8:09:19	1.074	63009.	2473.	12955.	-1.1	-.0094	259.
8:09:20	1.075	61809.	2515.	12933.	-1.0	-.0205	259.
8:09:21	1.076	60609.	2556.	12912.	-1.0	0.0277	259.
8:09:22	1.076	59408.	2598.	12891.	-1.0	-.0115	259.
8:09:23	1.075	58208.	2640.	12870.	-1.0	-.0676	259.
8:09:24	1.072	57010.	2682.	12848.	-1.1	-.1010	259.
8:09:25	1.069	55814.	2726.	12825.	-1.1	-.0936	259.
8:09:26	1.067	54622.	2769.	12803.	-1.1	-.0471	259.
8:09:27	1.066	53431.	2812.	12781.	-1.1	-.0050	259.

(CONTINUED)

F-15 AT 1.1M AT 12.5K MSL  
BOOM AT SITE 00 AT 0810 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:09:28	1.066	52241.	2855.	12758.	-1.1	0.0061	259.
8:09:29	1.066	51050.	2897.	12734.	-1.2	-.0205	259.
8:09:30	1.065	49860.	2940.	12708.	-1.3	-.0264	259.
8:09:31	1.064	48671.	2983.	12681.	-1.3	0.0016	259.
8:09:32	1.065	47482.	3026.	12654.	-1.3	0.0302	259.
8:09:33	1.066	46292.	3069.	12628.	-1.2	0.0133	259.
8:09:34	1.065	45102.	3112.	12604.	-1.2	-.0468	259.
8:09:35	1.063	43913.	3154.	12581.	-1.1	-.0912	259.
8:09:36	1.060	42726.	3196.	12558.	-1.1	-.0933	259.
8:09:37	1.058	41543.	3239.	12535.	-1.1	-.0430	259.
8:09:38	1.058	40361.	3282.	12512.	-1.1	0.0220	259.
8:09:39	1.059	39179.	3324.	12489.	-1.1	0.0433	259.
8:09:40	1.059	37995.	3368.	12466.	-1.0	-.0004	259.
8:09:41	1.058	36811.	3412.	12446.	-0.9	-.0759	259.
8:09:42	1.055	35630.	3456.	12429.	-0.7	-.1541	259.
8:09:43	1.049	34453.	3502.	12416.	-0.5	-.2534	259.
8:09:44	1.040	33285.	3547.	12410.	-0.1	-.3962	259.
8:09:45	1.026	32129.	3590.	12412.	0.4	-.5291	259.
8:09:46	1.010	30990.	3628.	12426.	1.1	-.6357	259.
8:09:47	0.990	29872.	3658.	12456.	2.1	-.7243	258.
8:09:48	0.968	28777.	3678.	12505.	3.1	-.7821	257.
8:09:49	0.946	27708.	3685.	12573.	4.3	-.7858	257.
8:09:50	0.924	26665.	3679.	12663.	5.6	-.7645	256.



F-15 AT 1.13M AT 15.2K MSL  
BOOM AT SITE 00 AT 1046 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:44:13	1.154	149507.	-1565.	22987.	2.0	-.0603	267.
10:44:14	1.153	148298.	-1358.	23021.	1.2	-.0527	267.
10:44:15	1.151	147091.	-1149.	23037.	0.3	-.0444	267.
10:44:16	1.150	145885.	-938.	23033.	-0.7	-.0083	267.
10:44:17	1.151	144680.	-724.	23008.	-1.7	0.0311	267.
10:44:18	1.152	143475.	-509.	22960.	-2.8	0.0444	267.
10:44:19	1.153	142269.	-296.	22887.	-4.1	0.0393	267.
10:44:20	1.153	141063.	-86.	22787.	-5.3	0.0410	267.
10:44:21	1.155	139857.	116.	22659.	-6.6	0.0707	266.
10:44:22	1.157	138649.	308.	22506.	-7.7	0.1356	266.
10:44:23	1.161	137438.	486.	22328.	-8.7	0.1965	265.
10:44:24	1.167	136221.	650.	22130.	-9.5	0.2263	264.
10:44:25	1.172	134998.	798.	21919.	-10.0	0.1980	264.
10:44:26	1.175	133767.	934.	21699.	-10.2	0.1324	263.
10:44:27	1.177	132532.	1063.	21477.	-10.2	0.1035	263.
10:44:28	1.179	131293.	1188.	21254.	-10.1	0.1129	263.
10:44:29	1.181	130050.	1313.	21033.	-10.1	0.1374	263.
10:44:30	1.185	128803.	1440.	20811.	-10.0	0.1418	263.
10:44:31	1.188	127552.	1572.	20590.	-10.0	0.1301	263.
10:44:32	1.191	126297.	1707.	20367.	-10.0	0.1063	263.
10:44:33	1.194	125039.	1843.	20146.	-10.0	0.0826	263.
10:44:34	1.195	123776.	1975.	19925.	-9.9	0.0732	263.
10:44:35	1.195	122512.	2096.	19706.	-9.8	0.0892	262.
10:44:36	1.196	121241.	2200.	19489.	-9.6	0.1042	261.
10:44:37	1.199	119965.	2278.	19277.	-9.4	0.0801	260.
10:44:38	1.202	118684.	2328.	19068.	-9.2	0.0512	258.
10:44:39	1.203	117399.	2350.	18865.	-8.9	0.0488	257.
10:44:40	1.204	116113.	2348.	18668.	-8.6	0.0595	256.
10:44:41	1.204	114823.	2331.	18479.	-8.2	0.0672	256.
10:44:42	1.205	113530.	2306.	18298.	-7.8	0.0520	255.
10:44:43	1.205	112235.	2279.	18125.	-7.5	0.0205	255.
10:44:44	1.204	110939.	2256.	17956.	-7.3	0.0052	256.
10:44:45	1.202	109641.	2236.	17792.	-7.2	-.0238	256.
10:44:46	1.199	108344.	2222.	17629.	-7.2	-.0413	256.
10:44:47	1.197	107048.	2212.	17467.	-7.2	0.0168	256.
10:44:48	1.197	105751.	2206.	17306.	-7.1	0.1080	256.
10:44:49	1.199	104451.	2202.	17146.	-7.0	0.1614	257.
10:44:50	1.202	103146.	2201.	16989.	-6.9	0.1309	257.
10:44:51	1.204	101836.	2200.	16834.	-6.7	0.0251	257.
10:44:52	1.202	100525.	2202.	16684.	-6.5	-.0715	257.
10:44:53	1.198	99215.	2208.	16539.	-6.2	-.1171	257.

(CONTINUED)

F-15 AT 1.13M AT 15.2K MSL  
BOOM AT SITE 00 AT 1046 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:44:54	1.194	97908.	2218.	16404.	-5.7	-.1122	257.
10:44:55	1.190	96603.	2234.	16282.	-5.0	-.0994	257.
10:44:56	1.186	95300.	2254.	16179.	-4.1	-.0629	258.
10:44:57	1.185	93997.	2278.	16098.	-3.1	-.0037	258.
10:44:58	1.185	92694.	2305.	16039.	-2.1	0.0292	258.
10:44:59	1.185	91389.	2330.	16001.	-1.3	-.0122	258.
10:45:00	1.183	90085.	2354.	15979.	-0.7	-.1116	258.
10:45:01	1.179	88783.	2377.	15969.	-0.2	-.2072	258.
10:45:02	1.172	87488.	2398.	15967.	0.1	-.1945	258.
10:45:03	1.168	86199.	2420.	15971.	0.3	-.0930	258.
10:45:04	1.167	84914.	2442.	15978.	0.4	-.0034	258.
10:45:05	1.167	83628.	2464.	15988.	0.5	-.0189	258.
10:45:06	1.165	82344.	2487.	16000.	0.6	-.1023	258.
10:45:07	1.161	81062.	2511.	16015.	0.7	-.1488	258.
10:45:08	1.157	79786.	2536.	16031.	0.8	-.1245	258.
10:45:09	1.154	78513.	2561.	16050.	0.9	-.0767	258.
10:45:10	1.153	77243.	2587.	16071.	1.0	-.0515	258.
10:45:11	1.151	75974.	2612.	16094.	1.0	-.0575	258.
10:45:12	1.149	74708.	2637.	16115.	0.9	-.0837	258.
10:45:13	1.147	73444.	2663.	16134.	0.7	-.1040	258.
10:45:14	1.144	72183.	2690.	16146.	0.4	-.0912	258.
10:45:15	1.141	70171.	2736.	16148.	-0.3	0.0025	258.
10:45:16	1.142	68914.	2764.	16137.	-0.7	0.0438	258.
10:45:17	1.143	67656.	2792.	16116.	-1.1	0.0318	258.
10:45:18	1.143	66398.	2819.	16090.	-1.4	-.0139	258.
10:45:19	1.142	65139.	2846.	16058.	-1.6	-.0356	258.
10:45:20	1.141	63882.	2872.	16022.	-1.7	-.0298	258.
10:45:21	1.140	62626.	2899.	15983.	-1.9	-.0232	258.
10:45:22	1.139	61371.	2925.	15941.	-2.0	-.0289	258.
10:45:23	1.138	60117.	2952.	15895.	-2.1	-.0336	258.
10:45:24	1.137	58864.	2980.	15848.	-2.2	-.0122	258.
10:45:25	1.137	57611.	3009.	15800.	-2.2	0.0394	258.
10:45:26	1.138	56357.	3038.	15753.	-2.1	0.0887	258.
10:45:27	1.141	55100.	3068.	15708.	-2.0	0.0870	258.
10:45:28	1.142	53841.	3096.	15666.	-1.8	0.0152	258.
10:45:29	1.141	52581.	3125.	15629.	-1.6	-.1001	258.
10:45:30	1.136	51324.	3154.	15597.	-1.4	-.1758	258.
10:45:31	1.131	50072.	3185.	15570.	-1.2	-.1514	258.
10:45:32	1.128	48825.	3216.	15546.	-1.1	-.0448	258.
10:45:33	1.128	47579.	3248.	15524.	-1.0	0.0369	258.
10:45:34	1.129	46333.	3281.	15502.	-1.0	0.0671	258.

(CONTINUED)

F-15 AT 1.13M AT 15.2K MSL  
BOOM AT SITE 00 AT 1046 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:45:35	1.131	45084.	3314.	15480.	-1.0	0.0699	258.
10:45:36	1.133	43833.	3347.	15460.	-0.9	0.0403	258.
10:45:37	1.133	42581.	3380.	15440.	-0.9	0.0087	258.
10:45:38	1.133	41329.	3414.	15422.	-0.8	-.0372	258.
10:45:39	1.131	40077.	3448.	15403.	-0.8	-.0602	258.
10:45:40	1.129	38828.	3482.	15385.	-0.8	-.0433	258.
10:45:41	1.128	37580.	3518.	15367.	-0.8	-.0067	258.
10:45:42	1.128	36332.	3553.	15349.	-0.8	0.0119	258.
10:45:43	1.129	35084.	3588.	15331.	-0.9	0.0150	258.
10:45:44	1.129	33835.	3624.	15311.	-0.9	0.0023	258.
10:45:45	1.128	32587.	3660.	15290.	-1.0	-.0477	258.
10:45:46	1.126	31339.	3695.	15268.	-1.0	-.0866	258.
10:45:47	1.123	30095.	3731.	15246.	-1.0	-.0895	258.
10:45:48	1.121	28853.	3768.	15225.	-0.9	-.0555	258.
10:45:49	1.120	27614.	3805.	15206.	-0.8	-.0067	258.
10:45:50	1.120	26374.	3842.	15191.	-0.6	0.0472	258.
10:45:51	1.122	25133.	3879.	15179.	-0.5	0.0849	258.
10:45:52	1.125	23889.	3916.	15170.	-0.3	0.0828	258.
10:45:53	1.126	22643.	3952.	15164.	-0.2	0.0194	258.
10:45:54	1.126	21396.	3988.	15160.	-0.2	-.0612	258.
10:45:55	1.123	20151.	4026.	15156.	-0.2	-.1030	258.
10:45:56	1.120	18909.	4064.	15153.	-0.2	-.0838	259.
10:45:57	1.118	17669.	4103.	15148.	-0.2	-.0229	259.
10:45:58	1.118	16431.	4141.	15143.	-0.2	0.0203	259.
10:45:59	1.119	15192.	4179.	15139.	-0.2	0.0183	258.
10:46:00	1.119	13952.	4216.	15136.	0.0	-.0301	258.
10:46:01	1.118	12714.	4252.	15138.	0.2	-.0630	258.
10:46:02	1.116	11477.	4288.	15144.	0.4	-.0669	258.

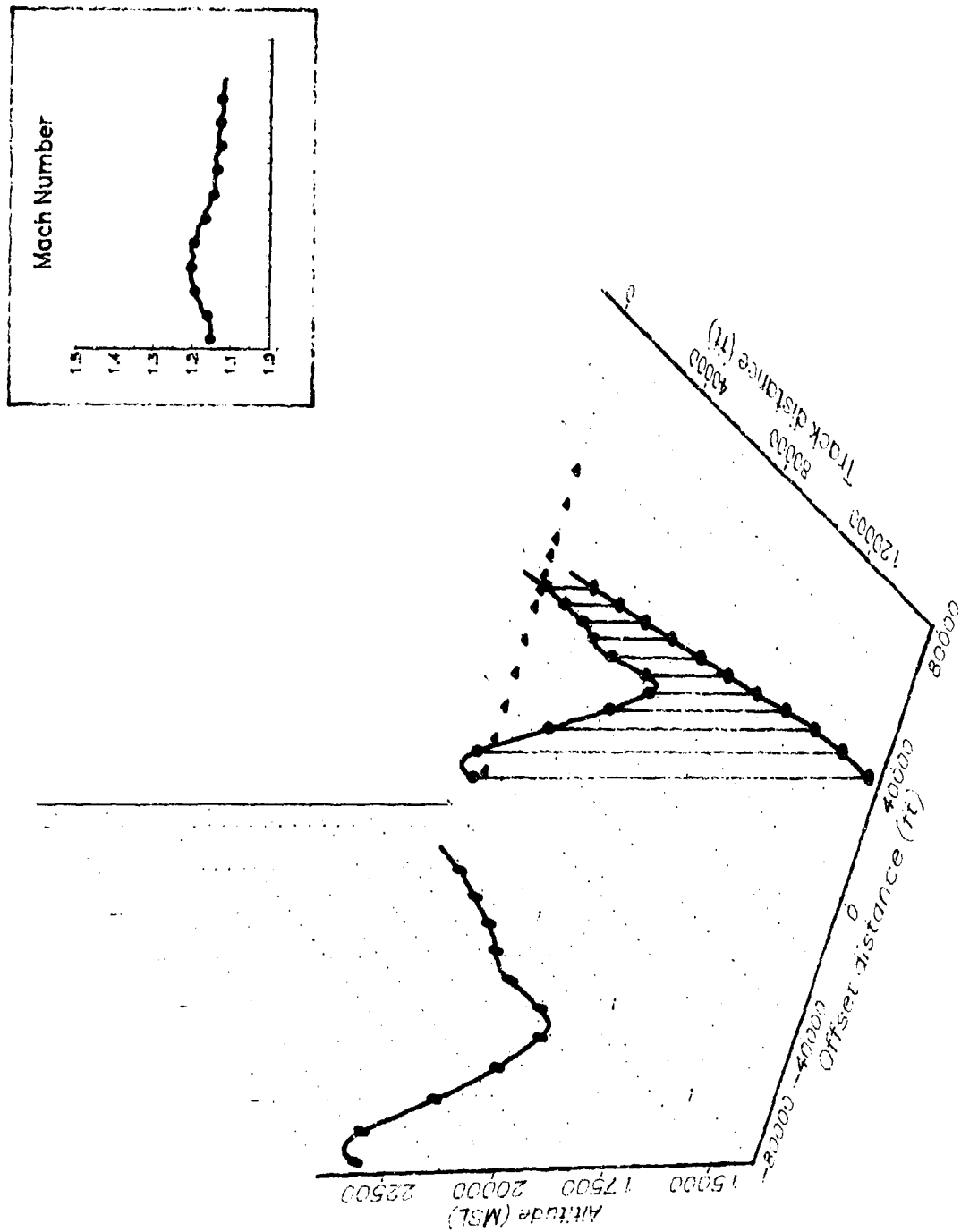


Figure B-18. F-15 on 4 Aug 87 at 1046

F-15 AT 1.28M AT 31K MSL

BOOM AT SITE 00 AT 1102 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:00:14	1.345	147765.	-235.	40930.	-9.6	0.1892	261.
11:00:15	1.350	146460.	-144.	40708.	-9.6	0.1881	261.
11:00:16	1.356	145150.	-52.	40484.	-9.7	0.1812	261.
11:00:17	1.362	143835.	41.	40257.	-9.7	0.1853	261.
11:00:18	1.368	142513.	135.	40027.	-9.9	0.2166	261.
11:00:19	1.375	141186.	231.	39792.	-10.1	0.2468	261.
11:00:20	1.383	139853.	328.	39550.	-10.4	0.2631	261.
11:00:21	1.391	138512.	427.	39298.	-10.7	0.2476	261.
11:00:22	1.398	137165.	526.	39037.	-11.1	0.1964	261.
11:00:23	1.402	135814.	623.	38764.	-11.5	0.1558	261.
11:00:24	1.405	134460.	717.	38482.	-11.8	0.1814	261.
11:00:25	1.410	133100.	805.	38192.	-12.1	0.2581	260.
11:00:26	1.417	131733.	881.	37897.	-12.1	0.3067	260.
11:00:27	1.424	130355.	944.	37599.	-12.1	0.2605	259.
11:00:28	1.428	128968.	993.	37303.	-11.9	0.1335	258.
11:00:29	1.428	127576.	1028.	37012.	-11.6	0.0095	258.
11:00:30	1.426	126181.	1050.	36727.	-11.4	-.0376	257.
11:00:31	1.423	124787.	1061.	36447.	-11.2	-.0140	257.
11:00:32	1.422	123392.	1064.	36170.	-11.2	0.0269	257.
11:00:33	1.421	121997.	1060.	35892.	-11.2	0.0466	256.
11:00:34	1.420	120601.	1052.	35612.	-11.3	0.0123	256.
11:00:35	1.417	119205.	1040.	35329.	-11.4	-.0768	256.
11:00:36	1.411	117812.	1026.	35045.	-11.5	-.1524	256.
11:00:37	1.402	116423.	1009.	34762.	-11.4	-.1705	256.
11:00:38	1.394	115039.	987.	34485.	-11.1	-.1391	256.
11:00:39	1.387	113659.	960.	34215.	-10.8	-.0930	255.
11:00:40	1.381	112279.	925.	33956.	-10.3	-.0666	255.
11:00:41	1.377	110900.	883.	33710.	-9.8	-.0611	255.
11:00:42	1.372	109521.	834.	33479.	-9.2	-.0764	254.
11:00:43	1.367	108142.	781.	33262.	-8.6	-.0851	254.
11:00:44	1.363	106763.	725.	33060.	-8.0	-.0726	254.
11:00:45	1.359	105386.	668.	32871.	-7.5	-.0645	254.
11:00:46	1.356	104009.	611.	32693.	-7.1	-.0667	254.
11:00:47	1.353	102633.	554.	32524.	-6.8	-.0453	254.
11:00:48	1.351	101257.	498.	32363.	-6.5	-.0107	254.
11:00:49	1.350	99882.	444.	32208.	-6.3	0.0074	254.
11:00:50	1.349	98505.	390.	32059.	-6.0	-.0220	254.
11:00:51	1.347	97129.	336.	31917.	-5.7	-.0804	254.
11:00:52	1.343	95754.	284.	31785.	-5.2	-.1067	254.
11:00:53	1.339	94381.	231.	31667.	-4.6	-.0852	254.
11:00:54	1.336	93009.	179.	31566.	-3.8	-.0370	254.

(CONTINUED)



F-15 AT 1.28M AT 31K MSL  
BOOM AT SITE 00 AT 1102 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:00:55	1.335	91638.	127.	31486.	-2.8	0.0066	254.
11:00:56	1.335	90265.	75.	31429.	-1.9	0.0099	254.
11:00:57	1.335	88891.	22.	31393.	-1.2	-.0139	254.
11:00:58	1.334	87518.	-30.	31372.	-0.7	-.0421	254.
11:00:59	1.332	86146.	-84.	31360.	-0.5	-.0639	254.
11:01:00	1.330	84776.	-138.	31348.	-0.6	-.0688	254.
11:01:01	1.328	83408.	-192.	31331.	-0.9	-.0657	254.
11:01:02	1.326	82042.	-247.	31307.	-1.1	-.0619	254.
11:01:03	1.324	80679.	-302.	31276.	-1.4	-.0621	254.
11:01:04	1.322	79317.	-357.	31242.	-1.4	-.0544	254.
11:01:05	1.320	77957.	-410.	31209.	-1.3	-.0260	254.
11:01:06	1.320	76598.	-463.	31179.	-1.1	0.0146	254.
11:01:07	1.320	75239.	-515.	31156.	-0.8	0.0174	254.
11:01:08	1.320	73879.	-568.	31140.	-0.6	-.0371	254.
11:01:09	1.318	72520.	-620.	31129.	-0.3	-.0998	254.
11:01:10	1.314	71164.	-672.	31123.	-0.2	-.1214	254.
11:01:11	1.311	69811.	-723.	31120.	-0.1	-.0918	254.
11:01:12	1.309	68462.	-773.	31117.	-0.1	-.0415	254.
11:01:13	1.308	67114.	-823.	31112.	-0.2	-.0067	254.
11:01:14	1.308	65766.	-873.	31106.	-0.3	0.0106	254.
11:01:15	1.309	64418.	-924.	31099.	-0.3	0.0193	254.
11:01:16	1.309	63070.	-974.	31091.	-0.3	0.0048	254.
11:01:17	1.309	61721.	-1024.	31085.	-0.2	-.0362	254.
11:01:18	1.307	60373.	-1073.	31083.	0.0	-.0955	254.
11:01:19	1.303	59029.	-1121.	31083.	0.1	-.1377	255.
11:01:20	1.299	57688.	-1168.	31086.	0.1	-.1178	255.
11:01:21	1.296	56351.	-1215.	31089.	0.1	-.0581	255.
11:01:22	1.295	55017.	-1262.	31090.	0.0	-.0041	255.
11:01:23	1.295	53682.	-1309.	31088.	-0.1	0.0280	254.
11:01:24	1.296	52347.	-1357.	31084.	-0.2	0.0103	254.
11:01:25	1.296	51011.	-1406.	31077.	-0.3	-.0548	254.
11:01:26	1.293	49677.	-1456.	31071.	-0.3	-.0912	254.
11:01:27	1.291	48346.	-1506.	31066.	-0.2	-.0470	254.
11:01:28	1.290	47017.	-1557.	31063.	-0.1	0.0019	254.
11:01:29	1.290	45687.	-1610.	31063.	0.0	0.0075	254.
11:01:30	1.290	44358.	-1664.	31064.	0.0	-.0083	254.
11:01:31	1.290	43029.	-1720.	31065.	0.0	-.0086	254.
11:01:32	1.290	41700.	-1778.	31064.	-0.1	0.0038	254.
11:01:33	1.290	40371.	-1836.	31062.	-0.2	0.0195	254.
11:01:34	1.291	39041.	-1894.	31057.	-0.3	-.0076	254.
11:01:35	1.290	37712.	-1953.	31050.	-0.3	-.0510	254.

(CONTINUED)

F-15 AT 1.28M AT 31K MSL  
BOOM AT SITE 00 AT 1102 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
11:01:36	1.288	36384.	-2011.	31042.	-0.3	-.0669 254.
11:01:37	1.286	35059.	-2069.	31035.	-0.3	-.0462 254.
11:01:38	1.285	33735.	-2126.	31028.	-0.3	-.0137 254.
11:01:39	1.285	32411.	-2184.	31022.	-0.3	-.0065 254.
11:01:40	1.284	31088.	-2243.	31016.	-0.3	-.0299 254.
11:01:41	1.283	29765.	-2302.	31009.	-0.3	-.0326 254.
11:01:42	1.282	28444.	-2361.	31002.	-0.3	-.0163 254.
11:01:43	1.281	27123.	-2421.	30994.	-0.3	-.0208 254.
11:01:44	1.281	25803.	-2481.	30986.	-0.3	-.0413 254.
11:01:45	1.279	24484.	-2542.	30980.	-0.3	-.0407 254.
11:01:46	1.278	23167.	-2603.	30974.	-0.2	-.0171 254.
11:01:47	1.278	21850.	-2664.	30969.	-0.2	0.0042 254.
11:01:48	1.278	20533.	-2727.	30966.	-0.1	0.0128 254.
11:01:49	1.279	19216.	-2790.	30963.	-0.1	0.0127 254.
11:01:50	1.279	17898.	-2853.	30962.	0.0	0.0123 254.

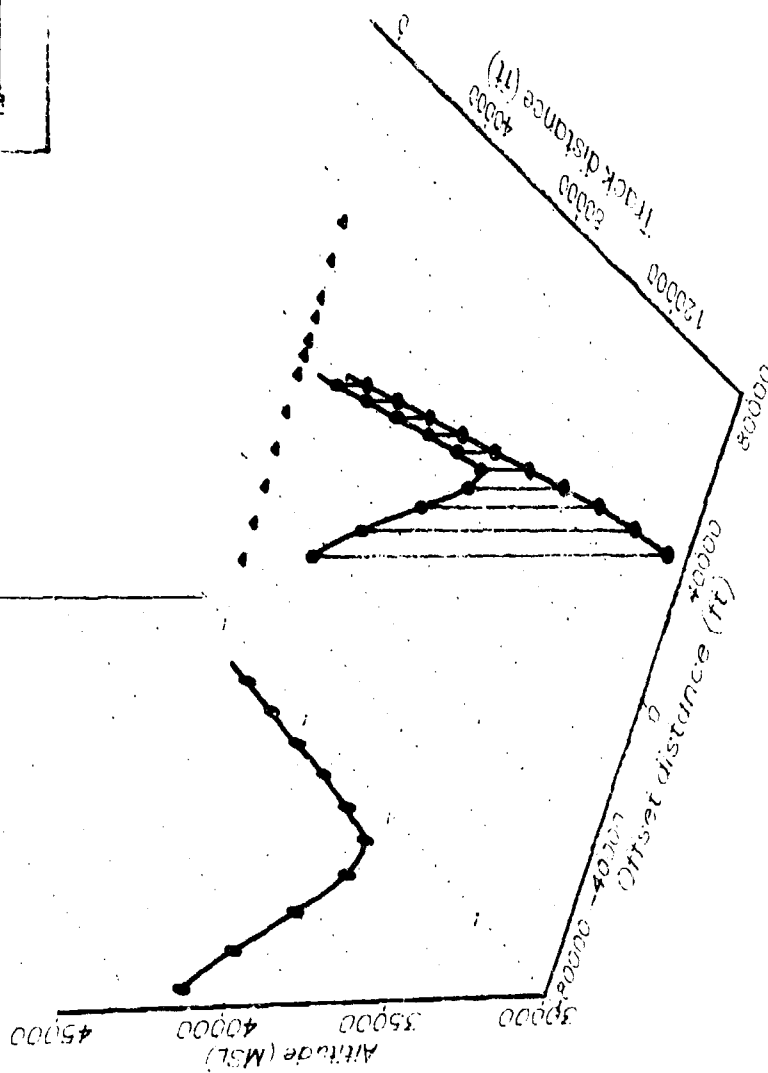
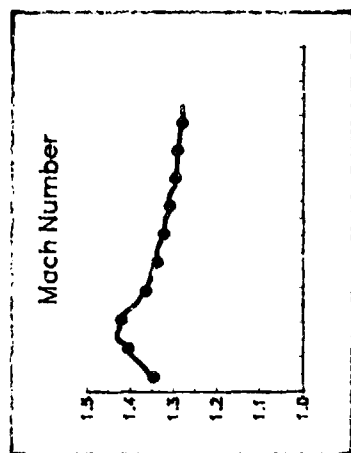


Figure B-19. F-15 on 4 Aug 87 at 1102

F-15 AT 1.42M AT 45K MSL  
BOOM AT SITE 00 AT 1111 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:09:10	1.415	147412.	4903.	45190.	1.0	0.0362	283.
11:09:11	1.416	146168.	5490.	45213.	0.9	0.0316	283.
11:09:12	1.416	144922.	6076.	45236.	0.9	-.0067	283.
11:09:13	1.416	143676.	6661.	45257.	0.9	-.0260	283.
11:09:14	1.416	142430.	7246.	45278.	0.8	0.0165	283.
11:09:15	1.417	141183.	7829.	45297.	0.8	0.0678	283.
11:09:16	1.419	139934.	8413.	45316.	0.7	0.0753	283.
11:09:17	1.421	138682.	8996.	45333.	0.6	0.0461	283.
11:09:18	1.423	137429.	9580.	45347.	0.5	0.0237	283.
11:09:19	1.423	136176.	10165.	45358.	0.4	0.0127	283.
11:09:20	1.423	134922.	10752.	45366.	0.3	0.0022	283.
11:09:21	1.423	133670.	11339.	45372.	0.2	-.0027	283.
11:09:22	1.423	132417.	11927.	45375.	0.1	0.0072	283.
11:09:23	1.424	131163.	12514.	45378.	0.1	0.0367	283.
11:09:24	1.426	129907.	13099.	45379.	0.0	0.0631	283.
11:09:25	1.428	128648.	13682.	45380.	0.0	0.0619	283.
11:09:26	1.429	127385.	14261.	45379.	-0.1	0.0378	282.
11:09:27	1.430	126118.	14835.	45377.	-0.1	0.0082	282.
11:09:28	1.430	124848.	15404.	45374.	-0.2	-.0288	282.
11:09:29	1.429	123576.	15966.	45370.	-0.2	-.0641	282.
11:09:30	1.426	122303.	16522.	45366.	-0.2	-.0481	281.
11:09:31	1.426	121028.	17070.	45362.	-0.1	0.0167	281.
11:09:32	1.427	119748.	17610.	45359.	-0.1	0.0625	280.
11:09:33	1.429	118463.	18142.	45356.	-0.1	0.0711	280.
11:09:34	1.431	117171.	18664.	45354.	-0.1	0.0393	279.
11:09:35	1.432	115872.	19174.	45353.	0.0	-.0079	279.
11:09:36	1.431	114568.	19669.	45352.	0.0	-.0404	278.
11:09:37	1.430	113257.	20147.	45351.	-0.1	-.0452	277.
11:09:38	1.429	111940.	20604.	45349.	-0.1	-.0282	276.
11:09:39	1.428	110614.	21035.	45345.	-0.2	-.0064	275.
11:09:40	1.428	109280.	21439.	45338.	-0.4	0.0022	274.
11:09:41	1.428	107935.	21813.	45327.	-0.5	-.0087	272.
11:09:42	1.427	106582.	22154.	45312.	-0.7	-.0288	271.
11:09:43	1.426	105220.	22459.	45294.	-0.8	-.0245	269.
11:09:44	1.426	103851.	22728.	45271.	-1.1	-.0038	268.
11:09:45	1.426	102474.	22960.	45241.	-1.4	0.0150	266.
11:09:46	1.426	101092.	23153.	45203.	-1.7	0.0240	264.
11:09:47	1.427	99703.	23311.	45156.	-2.1	0.0301	263.
11:09:48	1.428	98311.	23435.	45102.	-2.3	0.0400	261.
11:09:49	1.430	96915.	23532.	45043.	-2.4	0.0472	260.
11:09:50	1.431	95516.	23606.	44985.	-2.3	0.0427	259.

(CONTINUED)

F-15 AT 1.42M AT 45K MSL  
BOOM AT SITE 00 AT 1111 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:09:51	1.432	94114.	23664.	44931.	-2.0	0.0170	259.
11:09:52	1.432	92712.	23713.	44887.	-1.5	-.0351	259.
11:09:53	1.430	91310.	23756.	44857.	-0.9	-.0728	258.
11:09:54	1.428	89911.	23798.	44842.	-0.3	-.0543	258.
11:09:55	1.427	88512.	23839.	44840.	0.1	-.0060	258.
11:09:56	1.427	87115.	23879.	44846.	0.4	0.0318	258.
11:09:57	1.429	85716.	23918.	44858.	0.5	0.0658	258.
11:09:58	1.431	84315.	23955.	44871.	0.5	0.0931	258.
11:09:59	1.434	82911.	23991.	44882.	0.4	0.0903	258.
11:10:00	1.437	81504.	24025.	44890.	0.3	0.0360	258.
11:10:01	1.436	80096.	24058.	44895.	0.2	-.0667	258.
11:10:02	1.433	78691.	24092.	44899.	0.1	-.1397	258.
11:10:03	1.428	77289.	24128.	44903.	0.1	-.1236	258.
11:10:04	1.426	75891.	24164.	44906.	0.1	-.0321	258.
11:10:05	1.426	74495.	24201.	44910.	0.1	0.0468	258.
11:10:06	1.428	73097.	24237.	44913.	0.1	0.0595	258.
11:10:07	1.429	71697.	24272.	44915.	0.1	0.0224	258.
11:10:08	1.429	70296.	24306.	44916.	0.0	-.0300	258.
11:10:09	1.428	68897.	24337.	44917.	0.0	-.0644	258.
11:10:10	1.425	67499.	24364.	44918.	0.1	-.0570	258.
11:10:11	1.424	66103.	24383.	44921.	0.1	-.0047	257.
11:10:12	1.425	64707.	24391.	44925.	0.2	0.0589	257.
11:10:13	1.427	63309.	24386.	44930.	0.2	0.0777	256.
11:10:14	1.429	61909.	24370.	44936.	0.3	0.0296	256.
11:10:15	1.429	60509.	24345.	44944.	0.3	-.0561	255.
11:10:16	1.426	59110.	24315.	44951.	0.3	-.1080	255.
11:10:17	1.423	57714.	24282.	44960.	0.3	-.0787	255.
11:10:18	1.421	56321.	24248.	44968.	0.3	-.0186	255.
11:10:19	1.421	54929.	24214.	44974.	0.2	0.0198	255.
11:10:20	1.422	53536.	24179.	44979.	0.2	0.0375	255.
11:10:21	1.424	52142.	24144.	44983.	0.1	0.0437	255.
11:10:22	1.425	50747.	24109.	44985.	0.1	0.0413	255.
11:10:23	1.426	49351.	24073.	44987.	0.0	0.0327	255.
11:10:24	1.427	47953.	24036.	44988.	0.0	0.0148	255.
11:10:25	1.427	46555.	23998.	44988.	0.0	-.0085	255.
11:10:26	1.427	45157.	23959.	44988.	0.0	-.0221	255.
11:10:27	1.426	43760.	23918.	44989.	0.0	-.0098	255.
11:10:28	1.426	42363.	23876.	44989.	0.0	0.0094	255.
11:10:29	1.426	40966.	23833.	44990.	0.0	-.0036	255.
11:10:30	1.426	39570.	23788.	44990.	0.0	-.0283	255.
11:10:31	1.425	38174.	23743.	44990.	0.0	-.0408	255.

(CONTINUED)

F-15 AT 1.42M AT 45K MSL

BOOM AT SITE 00 AT 1111 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:10: 2	1.423	36779.	23696.	44989.	-0.1	-.0401	255.
11:10:33	1.423	35386.	23649.	44987.	-0.1	-.0030	255.
11:10:34	1.423	33993.	23600.	44984.	-0.1	0.0418	255.
11:10:35	1.425	32599.	23551.	44930.	-0.2	0.0391	254.
11:10:36	1.425	31203.	23500.	44 76.	-0.2	0.0093	254.
11:10:37	1.425	29808.	23451.	44971.	-0.2	-.0074	255.
11:10:38	1.425	28412.	23403.	44965.	-0.2	-.0031	255.
11:10:39	1.426	27016.	23356.	44961.	-0.2	0.0263	255.
11:10:40	1.427	25620.	23307.	44958.	-0.1	0.0364	254.
11:10:41	1.427	24223.	23249.	44957.	0.0	-.0109	254.
11:10:42	1.426	22827.	23176.	44959.	0.2	-.0959	253.
11:10:43	1.421	21436.	23070.	44965.	0.3	-.1876	252.
11:10:44	1.414	20054.	22951.	44974.	0.4	-.2536	250.
11:10:45	1.405	18685.	22785.	44986.	0.5	-.2919	248.
11:10:46	1.395	17333.	22575.	44998.	0.5	-.2950	246.
11:10:47	1.386	15999.	22318.	45010.	0.5	-.2694	244.
11:10:48	1.377	14685.	22012.	45021.	0.4	-.2282	242.
11:10:49	1.370	13394.	21655.	45028.	0.2	-.2132	239.
11:10:50	1.363	12128.	21247.	45031.	0.0	-.2371	237.
11:10:51	1.354	10888.	20789.	45026.	-0.4	-.2626	234.
11:10:52	1.346	9679.	20284.	45011.	-0.9	-.2411	232.
11:10:53	1.339	8501.	19733.	44986.	-1.4	-.2029	229.
11:10:54	1.332	7355.	19138.	44947.	-2.0	-.2033	227.
11:10:55	1.325	6242.	18501.	44894.	-2.6	-.2065	224.
11:10:56	1.318	5166.	17822.	44826.	-3.3	-.1714	222.
11:10:57	1.313	4127.	17103.	44744.	-4.0	-.0936	219.

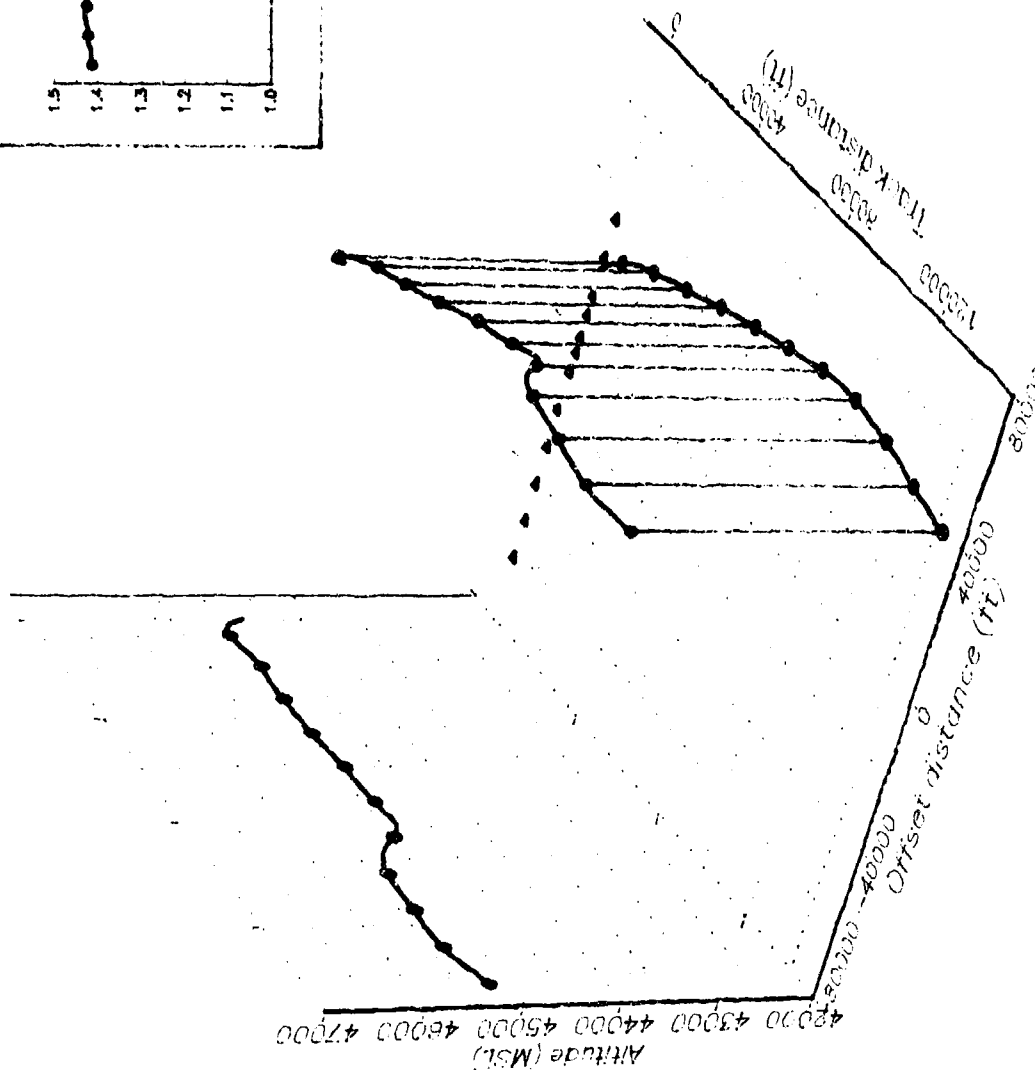
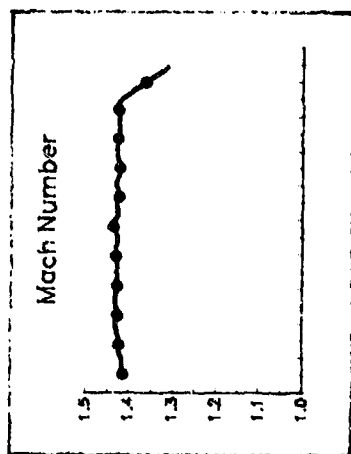


Figure B-20. F-15 on 4 Aug 87 at 1111

F-15 AT 1.4M AT 45.5K MSL  
BOOM AT SITE 00 AT 1134 ON 04 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:32:09	1.346	148627.	-1942.	45971.	-3.8	0.1112	259.
11:32:10	1.349	147310.	-1890.	45891.	-3.1	0.1110	259.
11:32:11	1.352	145990.	-1837.	45825.	-2.5	0.0934	259.
11:32:12	1.355	144666.	-1784.	45773.	-1.9	0.0831	259.
11:32:13	1.358	143339.	-1730.	45735.	-1.4	0.0886	259.
11:32:14	1.361	142009.	-1676.	45707.	-1.0	0.1078	259.
11:32:15	1.365	140675.	-1623.	45687.	-0.7	0.1250	259.
11:32:16	1.369	139338.	-1572.	45671.	-0.6	0.1320	259.
11:32:17	1.373	137996.	-1521.	45658.	-0.6	0.1297	259.
11:32:18	1.378	136650.	-1472.	45645.	-0.5	0.1337	259.
11:32:19	1.382	135299.	-1423.	45632.	-0.6	0.1492	259.
11:32:20	1.387	133944.	-1374.	45619.	-0.5	0.1458	259.
11:32:21	1.391	132584.	-1326.	45606.	-0.5	0.1163	259.
11:32:22	1.395	131221.	-1277.	45595.	-0.4	0.0886	259.
11:32:23	1.397	129854.	-1228.	45586.	-0.3	0.0833	259.
11:32:24	1.400	128485.	-1177.	45580.	-0.2	0.1015	259.
11:32:25	1.404	127113.	-1126.	45576.	-0.1	0.1176	259.
11:32:26	1.408	125737.	-1074.	45573.	-0.1	0.1083	259.
11:32:27	1.411	124358.	-1021.	45570.	-0.1	0.0729	259.
11:32:28	1.412	122976.	-969.	45566.	-0.2	0.0310	259.
11:32:29	1.413	121593.	-916.	45561.	-0.2	0.0018	259.
11:32:30	1.413	120210.	-864.	45555.	-0.3	-0.0032	259.
11:32:31	1.413	118827.	-812.	45549.	-0.3	0.0094	259.
11:32:32	1.413	117444.	-760.	45543.	-0.2	0.0380	259.
11:32:33	1.415	116060.	-709.	45533.	-0.2	0.0828	259.
11:32:34	1.419	114673.	-659.	45534.	-0.1	0.1204	259.
11:32:35	1.423	113282.	-608.	45531.	-0.1	0.1478	259.
11:32:36	1.428	111886.	-559.	45529.	-0.1	0.1435	259.
11:32:37	1.432	110486.	-510.	45527.	-0.1	0.1085	259.
11:32:38	1.435	109082.	-461.	45525.	0.0	0.0708	259.
11:32:39	1.437	107676.	-412.	45525.	0.0	0.0419	259.
11:32:40	1.438	106269.	-364.	45524.	0.0	0.0008	259.
11:32:41	1.437	104862.	-316.	45525.	0.0	-0.0596	259.
11:32:42	1.434	103457.	-268.	45525.	0.0	-0.1088	259.
11:32:43	1.430	102054.	-219.	45527.	0.1	-0.1168	259.
11:32:44	1.427	100656.	-171.	45529.	0.1	-0.0500	259.
11:32:45	1.427	99259.	-123.	45533.	0.2	0.0784	259.
11:32:46	1.432	97860.	-76.	45537.	0.2	0.1717	259.
11:32:47	1.438	96455.	-31.	45542.	0.2	0.1807	259.
11:32:48	1.442	95045.	12.	45547.	0.2	0.1114	258.
11:32:49	1.445	93631.	54.	45551.	0.1	0.0303	258.

(CONTINUED)



F-15 AT 1.4M AT 45.5K MSL  
BOOM AT SITE 00 AT 1134 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:32:50	1.445	92216.	94.	45553.	0.1	-.0235	258.
11:32:51	1.443	90801.	133.	45554.	0.0	-.0756	258.
11:32:52	1.440	89389.	172.	45554.	0.0	-.1019	258.
11:32:53	1.437	87980.	210.	45555.	0.0	-.0846	258.
11:32:54	1.435	86574.	248.	45556.	0.1	-.0338	258.
11:32:55	1.435	85168.	287.	45558.	0.1	0.0536	258.
11:32:56	1.438	83761.	324.	45561.	0.1	0.1266	258.
11:32:57	1.443	82351.	360.	45564.	0.1	0.1225	258.
11:32:58	1.446	80936.	393.	45567.	0.1	0.0488	258.
11:32:59	1.446	79520.	425.	45570.	0.1	-.0571	258.
11:33:00	1.443	78105.	456.	45572.	0.1	-.0941	258.
11:33:01	1.441	76694.	486.	45575.	0.1	-.0222	258.
11:33:02	1.442	75282.	515.	45577.	0.1	0.0918	258.
11:33:03	1.446	73868.	541.	45579.	0.1	0.1386	258.
11:33:04	1.449	72450.	566.	45582.	0.1	0.0668	258.
11:33:05	1.450	71030.	590.	45585.	0.2	-.0437	258.
11:33:06	1.447	69611.	612.	45590.	0.2	-.0924	258.
11:33:07	1.444	68195.	634.	45596.	0.2	-.0790	258.
11:33:08	1.442	66781.	655.	45602.	0.2	-.0780	257.
11:33:09	1.439	65370.	673.	45607.	0.2	-.0981	257.
11:33:10	1.436	63961.	691.	45610.	0.1	-.0772	257.
11:33:11	1.434	62556.	707.	45612.	0.1	-.0331	257.
11:33:12	1.434	61151.	723.	45613.	0.0	-.0088	257.
11:33:13	1.434	59747.	737.	45612.	0.0	-.0036	257.
11:33:14	1.433	58343.	749.	45611.	0.0	-.0075	257.
11:33:15	1.433	56939.	761.	45610.	0.0	0.0007	257.
11:33:16	1.433	55535.	773.	45609.	0.0	0.0008	257.
11:33:17	1.433	54131.	783.	45608.	0.0	-.0422	257.
11:33:18	1.431	52728.	794.	45607.	0.0	-.0811	257.
11:33:19	1.428	51328.	804.	45606.	-0.1	-.0713	257.
11:33:20	1.426	49930.	815.	45605.	-0.1	-.0313	257.
11:33:21	1.426	48533.	824.	45602.	-0.1	0.0013	257.
11:33:22	1.426	47136.	832.	45599.	-0.1	0.0155	257.
11:33:23	1.427	45739.	839.	45595.	-0.2	0.0136	257.
11:33:24	1.427	44341.	845.	45592.	-0.1	-.0171	257.
11:33:25	1.426	42944.	851.	45588.	-0.1	-.0432	257.
11:33:26	1.424	41548.	858.	45587.	0.0	-.0354	257.
11:33:27	1.423	40154.	865.	45586.	0.0	-.0287	257.
11:33:28	1.423	38760.	872.	45586.	0.0	-.0245	257.
11:33:29	1.422	37367.	878.	45585.	0.0	-.0265	257.
11:33:30	1.421	35975.	883.	45585.	-0.1	-.0401	257.

(CONTINUED)

F-15 AT 1.4M AT 45.5K MSL  
BOOM AT SITE 00 AT 1134 ON 04 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
11:33:31	1.419	34584.	888.	45583.	-0.1	-.0430 257.
11:33:32	1.418	33194.	892.	45580.	-0.2	-.0268 257.
11:33:33	1.418	31806.	895.	45574.	-0.3	-.0047 257.
11:33:34	1.418	30417.	898.	45566.	-0.4	0.0060 257.
11:33:35	1.418	29029.	900.	45555.	-0.5	0.0072 257.
11:33:36	1.418	27640.	901.	45543.	-0.5	-.0154 257.
11:33:37	1.417	26252.	902.	45532.	-0.4	-.0536 257.
11:33:38	1.414	24865.	903.	45524.	-0.3	-.0752 257.
11:33:39	1.412	23481.	904.	45520.	-0.1	-.0816 257.
11:33:40	1.409	22099.	905.	45520.	0.1	-.0800 257.

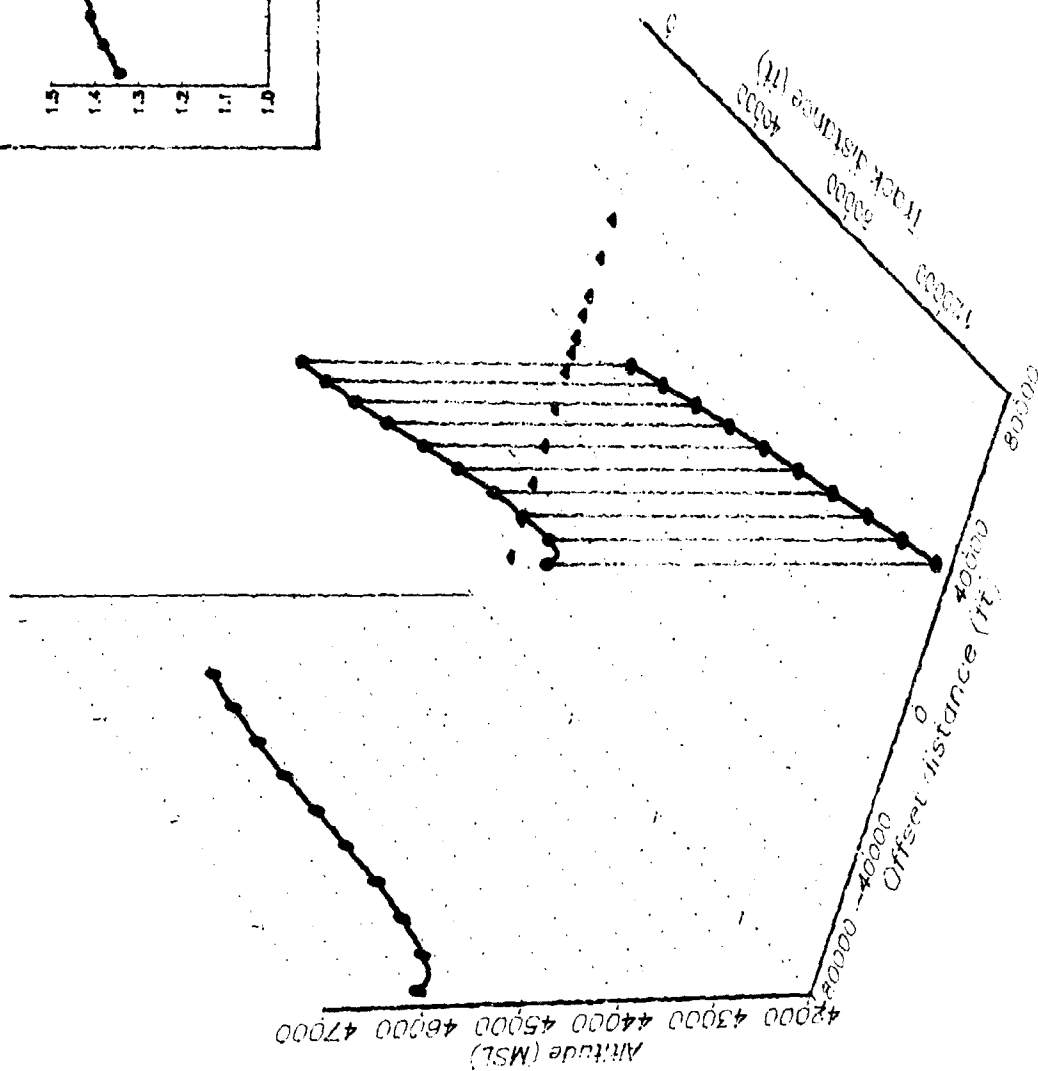
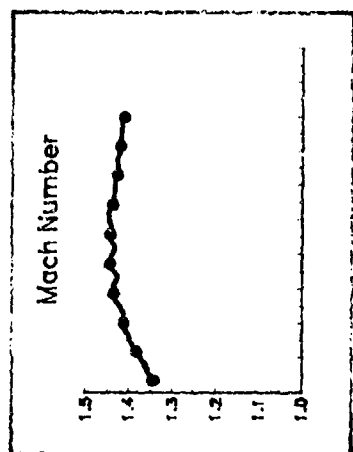


Figure B-21. F-15 on 4 Aug 87 at 1134

F-16 AT 1.25M AT 29.5K MSL  
BOOM AT SITE 00 AT 0906 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:03:54	1.097	149129.	476.	32307.	-4.5	0.1330	261.
9:03:55	1.101	148008.	560.	32219.	-4.5	0.1341	261.
9:03:56	1.105	146882.	639.	32131.	-4.5	0.1413	261.
9:03:57	1.109	145750.	715.	32041.	-4.5	0.1648	261.
9:03:58	1.114	144614.	786.	31952.	-4.5	0.1941	260.
9:03:59	1.120	143471.	852.	31862.	-4.4	0.2030	260.
9:04:00	1.126	142321.	913.	31773.	-4.4	0.1884	260.
9:04:01	1.131	141165.	968.	31685.	-4.3	0.1647	259.
9:04:02	1.135	140003.	1015.	31598.	-4.3	0.1479	259.
9:04:03	1.140	138836.	1056.	31511.	-4.2	0.1491	259.
9:04:04	1.144	137663.	1088.	31426.	-4.2	0.1582	258.
9:04:05	1.149	136486.	1112.	31341.	-4.1	0.1657	258.
9:04:06	1.154	135303.	1127.	31256.	-4.0	0.1583	257.
9:04:07	1.158	134115.	1133.	31172.	-4.0	0.1443	257.
9:04:08	1.162	132922.	1129.	31090.	-3.9	0.1476	256.
9:04:09	1.167	131725.	1115.	31008.	-3.9	0.1728	256.
9:04:10	1.172	130522.	1093.	30928.	-3.8	0.2039	255.
9:04:11	1.178	129313.	1062.	30848.	-3.7	0.2046	255.
9:04:12	1.184	128098.	1024.	30769.	-3.7	0.1632	255.
9:04:13	1.187	126878.	981.	30692.	-3.6	0.0898	254.
9:04:14	1.189	125654.	933.	30617.	-3.4	0.0583	254.
9:04:15	1.191	124429.	883.	30545.	-3.3	0.0891	254.
9:04:16	1.193	123201.	832.	30476.	-3.1	0.1141	254.
9:04:17	1.196	121969.	780.	30410.	-3.0	0.1014	254.
9:04:18	1.199	120733.	729.	30348.	-2.8	0.0836	254.
9:04:19	1.201	119495.	677.	30290.	-2.6	0.0869	254.
9:04:20	1.204	118254.	626.	30234.	-2.5	0.1090	254.
9:04:21	1.207	117009.	574.	30181.	-2.4	0.1200	254.
9:04:22	1.210	115761.	520.	30131.	-2.3	0.1113	254.
9:04:23	1.213	114509.	462.	30082.	-2.2	0.0945	254.
9:04:24	1.216	113254.	398.	30035.	-2.1	0.0757	253.
9:04:25	1.217	111997.	326.	29989.	-2.1	0.0621	253.
9:04:26	1.219	110740.	244.	29943.	-2.0	0.0590	252.
9:04:27	1.220	109481.	151.	29898.	-2.0	0.0423	252.
9:04:28	1.221	108222.	46.	29855.	-1.9	0.0437	251.
9:04:29	1.223	106962.	-71.	29813.	-1.9	0.0928	251.
9:04:30	1.226	105701.	-200.	29772.	-1.8	0.1413	250.
9:04:31	1.230	104437.	-338.	29734.	-1.7	0.1247	250.
9:04:32	1.233	103169.	-485.	29698.	-1.6	0.0617	250.
9:04:33	1.234	101901.	-637.	29664.	-1.4	0.0090	249.
9:04:34	1.234	100632.	-792.	29634.	-1.3	0.0155	249.

(CONTINUED)

F-16 AT 1.25M AT 29.5K MSL  
BOOM AT SITE 00 AT 0906 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:04:35	1.235	99363.	-949.	29607.	-1.1	0.0532	249.
9:04:36	1.236	98092.	-1106.	29585.	-0.9	0.0724	249.
9:04:37	1.238	96819.	-1262.	29568.	-0.6	0.0528	249.
9:04:38	1.239	95544.	-1417.	29557.	-0.4	0.0125	249.
9:04:39	1.239	94268.	-1572.	29552.	-0.1	-.0125	249.
9:04:40	1.239	92993.	-1725.	29553.	0.1	-.0056	249.
9:04:41	1.239	91717.	-1878.	29558.	0.3	0.0141	249.
9:04:42	1.240	90442.	-2031.	29566.	0.3	0.0382	249.
9:04:43	1.241	89164.	-2184.	29573.	0.3	0.0623	249.
9:04:44	1.243	87886.	-2337.	29580.	0.3	0.0681	249.
9:04:45	1.245	86605.	-2492.	29585.	0.2	0.0433	249.
9:04:46	1.246	85323.	-2647.	29588.	0.1	-.0002	249.
9:04:47	1.246	84041.	-2803.	29590.	0.1	-.0339	249.
9:04:48	1.244	82759.	-2959.	29591.	0.1	-.0369	249.
9:04:49	1.244	81479.	-3115.	29593.	0.1	0.0041	249.
9:04:50	1.245	80199.	-3270.	29595.	0.1	0.0769	249.
9:04:51	1.248	78916.	-3426.	29598.	0.1	0.1360	249.
9:04:52	1.253	77630.	-3582.	29601.	0.2	0.1358	249.
9:04:53	1.256	76339.	-3738.	29605.	0.2	0.0610	249.
9:04:54	1.257	75046.	-3894.	29610.	0.2	-.0155	249.
9:04:55	1.256	73753.	-4049.	29615.	0.2	-.0269	249.
9:04:56	1.255	72461.	-4203.	29620.	0.2	0.0032	250.
9:04:57	1.256	71168.	-4356.	29625.	0.2	0.0160	250.
9:04:58	1.256	69875.	-4508.	29630.	0.2	-.0083	250.
9:04:59	1.255	68583.	-4660.	29633.	0.1	-.0362	250.
9:05:00	1.254	67291.	-4812.	29634.	0.0	-.0423	250.
9:05:01	1.253	66000.	-4963.	29634.	-0.1	-.0102	250.
9:05:02	1.254	64710.	-5114.	29632.	-0.1	0.0509	250.
9:05:03	1.256	63419.	-5266.	29628.	-0.2	0.0994	250.
9:05:04	1.259	62124.	-5418.	29624.	-0.2	0.1066	250.
9:05:05	1.262	60826.	-5571.	29620.	-0.2	0.0707	250.
9:05:06	1.264	59526.	-5725.	29617.	-0.1	0.0281	250.
9:05:07	1.264	58225.	-5878.	29614.	-0.1	-.0010	250.
9:05:08	1.264	56924.	-6032.	29613.	-0.1	-.0128	250.
9:05:09	1.263	55623.	-6185.	29612.	0.0	-.0146	250.
9:05:10	1.263	54322.	-6339.	29611.	0.0	-.0130	250.
9:05:11	1.263	53023.	-6492.	29611.	0.0	-.0082	250.
9:05:12	1.263	51723.	-6645.	29610.	0.0	0.0068	250.
9:05:13	1.263	50423.	-6799.	29609.	0.0	0.0338	250.
9:05:14	1.265	49122.	-6952.	29608.	0.0	0.0607	250.
9:05:15	1.267	47819.	-7105.	29607.	-0.1	0.0781	250.

(CONTINUED)

F-16 AT 1.25M AT 29.5K MSL  
BOOM AT SITE 00 AT 0906 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:05:16	1.269	46514.	-7258.	29606.	-0.1	0.0660	250.
9:05:17	1.270	45206.	-7410.	29604.	-0.1	0.0122	250.
9:05:18	1.270	43898.	-7562.	29603.	-0.1	-.0494	250.
9:05:19	1.268	42591.	-7712.	29602.	0.0	-.0677	250.
9:05:20	1.266	41287.	-7862.	29601.	0.0	0.0019	250.
9:05:21	1.268	39982.	-8012.	29601.	0.0	0.0916	250.
9:05:22	1.271	38674.	-8163.	29601.	0.0	0.0770	250.
9:05:23	1.272	37365.	-8315.	29601.	0.0	0.0279	250.
9:05:24	1.273	36054.	-8467.	29601.	0.0	0.0352	250.
9:05:25	1.275	34742.	-8620.	29602.	0.0	0.0531	250.
9:05:26	1.276	33429.	-8771.	29602.	0.0	0.0436	250.
9:05:27	1.277	32114.	-8923.	29603.	0.1	0.0173	250.
9:05:28	1.277	30798.	-9073.	29605.	0.1	-.0119	250.
9:05:29	1.277	29482.	-9222.	29607.	0.1	-.0172	250.
9:05:30	1.277	28167.	-9371.	29611.	0.2	0.0156	250.
9:05:31	1.278	26852.	-9520.	29616.	0.2	0.0448	250.
9:05:32	1.279	25535.	-9670.	29620.	0.2	0.0277	250.
9:05:33	1.279	24217.	-9820.	29623.	0.1	-.0077	250.
9:05:34	1.279	22900.	-9969.	29626.	0.1	-.0312	250.
9:05:35	1.278	21583.	-10119.	29629.	0.1	-.0308	250.
9:05:36	1.277	20268.	-10267.	29631.	0.1	-.0185	250.
9:05:37	1.277	18952.	-10414.	29633.	0.1	-.0102	250.
9:05:38	1.276	17637.	-10561.	29635.	0.1	-.0092	250.

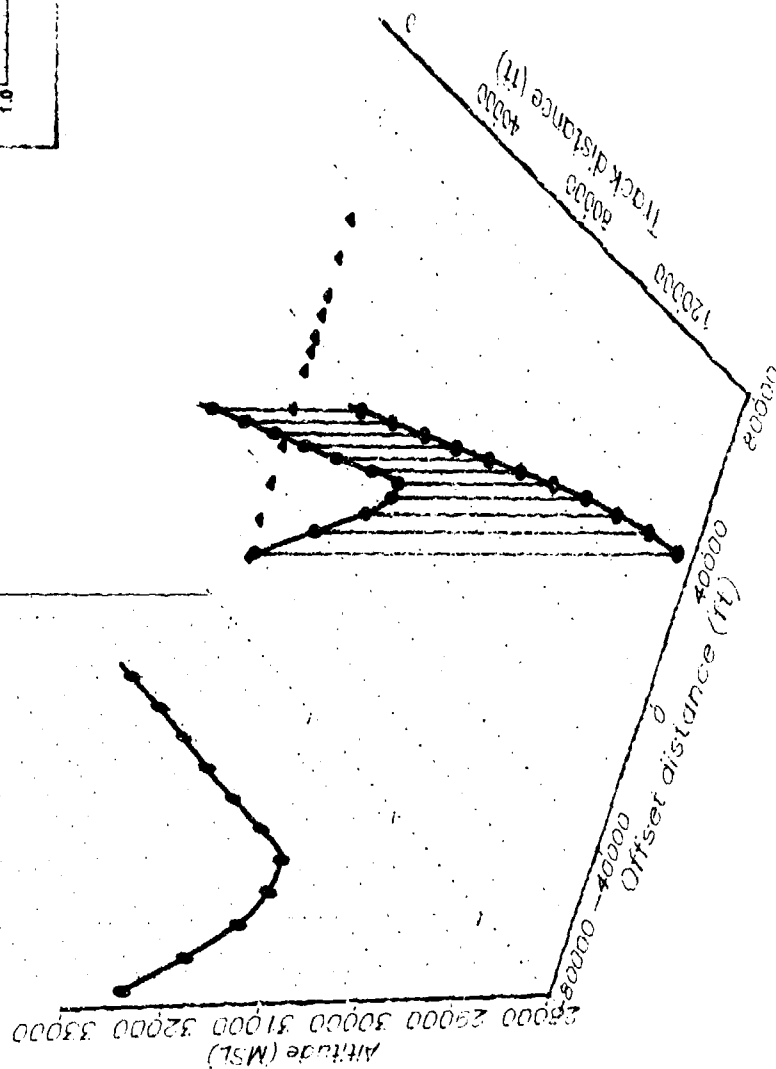
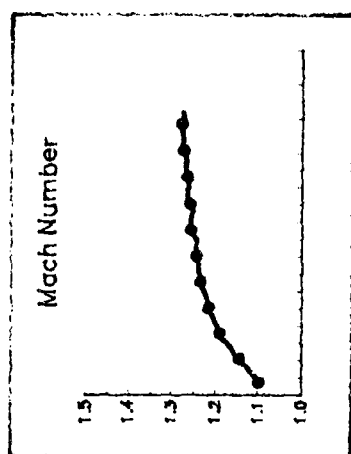


Figure B-22. F-16 on 5 Aug 87 at 0906

F-16 AT 1.43M AT 46.7K MSL  
BOOM AT SITE 00 AT 0933 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:31:35	1.098	147595.	-8469.	49447.	-12.6	0.3204	260.
9:31:36	1.107	146573.	-8417.	49219.	-12.7	0.3183	260.
9:31:37	1.116	145542.	-8365.	48987.	-12.8	0.2985	260.
9:31:38	1.124	144501.	-8313.	48752.	-12.9	0.2616	260.
9:31:39	1.130	143453.	-8260.	48512.	-13.0	0.2498	260.
9:31:40	1.137	142397.	-8207.	48270.	-13.1	0.2604	260.
9:31:41	1.144	141334.	-8153.	48024.	-13.2	0.2812	260.
9:31:42	1.153	140262.	-8098.	47775.	-13.2	0.3021	260.
9:31:43	1.162	139181.	-8043.	47522.	-13.3	0.3191	260.
9:31:44	1.172	138090.	-7986.	47265.	-13.4	0.3221	260.
9:31:45	1.182	136990.	-7929.	47005.	-13.4	0.3061	260.
9:31:46	1.192	135881.	-7870.	46742.	-13.5	0.2878	260.
9:31:47	1.202	134763.	-7811.	46475.	-13.4	0.2883	260.
9:31:48	1.212	133635.	-7749.	46208.	-13.3	0.2967	260.
9:31:49	1.222	132497.	-7687.	45943.	-12.9	0.2900	260.
9:31:50	1.232	131349.	-7623.	45686.	-12.3	0.2642	260.
9:31:51	1.242	130189.	-7559.	45440.	-11.4	0.2310	260.
9:31:52	1.250	129018.	-7494.	45214.	-10.3	0.1999	260.
9:31:53	1.256	127836.	-7429.	45012.	-8.9	0.1598	260.
9:31:54	1.262	126644.	-7364.	44839.	-7.4	0.1177	260.
9:31:55	1.266	125445.	-7299.	44697.	-5.9	0.0786	260.
9:31:56	1.269	124239.	-7236.	44586.	-4.5	0.0670	260.
9:31:57	1.272	123030.	-7173.	44504.	-3.2	0.0889	260.
9:31:58	1.276	121816.	-7112.	44448.	-2.1	0.1122	260.
9:31:59	1.280	120598.	-7053.	44411.	-1.3	0.1229	259.
9:32:00	1.284	119375.	-6997.	44390.	-0.7	0.1060	259.
9:32:01	1.288	118149.	-6943.	44381.	-0.2	0.0715	259.
9:32:02	1.289	116921.	-6891.	44380.	0.1	0.0428	259.
9:32:03	1.291	115691.	-6841.	44384.	0.3	0.0392	259.
9:32:04	1.292	114460.	-6793.	44391.	0.4	0.0638	259.
9:32:05	1.295	113226.	-6745.	44401.	0.5	0.0974	259.
9:32:06	1.298	111990.	-6698.	44411.	0.5	0.1176	259.
9:32:07	1.303	110750.	-6653.	44421.	0.4	0.1430	259.
9:32:08	1.308	109505.	-6608.	44430.	0.4	0.1735	259.
9:32:09	1.314	108255.	-6562.	44439.	0.4	0.1884	259.
9:32:10	1.320	106999.	-6517.	44446.	0.3	0.1601	259.
9:32:11	1.324	105737.	-6470.	44452.	0.2	0.1156	259.
9:32:12	1.327	104472.	-6423.	44457.	0.2	0.0749	259.
9:32:13	1.329	103205.	-6374.	44462.	0.2	0.0401	259.
9:32:14	1.330	101936.	-6325.	44467.	0.2	0.0053	259.
9:32:15	1.330	100667.	-6274.	44472.	0.2	0.0034	259.

(CONTINUED)



F-16 AT 1.43M AT 46.7K MSL  
BOOM AT SITE 00 AT 0933 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:32:16	1.331	99398.	-6221.	44478.	0.3	0.0628	259.
9:32:17	1.334	98127.	-6168.	44483.	0.2	0.1441	259.
9:32:18	1.339	96851.	-6114.	44488.	0.2	0.1556	259.
9:32:19	1.344	95571.	-6059.	44493.	0.2	0.1291	259.
9:32:20	1.348	94286.	-6004.	44496.	0.1	0.1154	259.
9:32:21	1.352	92998.	-5948.	44499.	0.1	0.0995	259.
9:32:22	1.355	91707.	-5893.	44502.	0.1	0.0797	259.
9:32:23	1.357	90413.	-5837.	44505.	0.2	0.0432	259.
9:32:24	1.357	89118.	-5780.	44510.	0.3	0.0187	259.
9:32:25	1.359	87822.	-5723.	44517.	0.4	0.0558	259.
9:32:26	1.361	86524.	-5665.	44526.	0.4	0.1143	259.
9:32:27	1.365	85223.	-5607.	44537.	0.5	0.1450	259.
9:32:28	1.370	83918.	-5548.	44548.	0.5	0.1458	259.
9:32:29	1.374	82608.	-5489.	44560.	0.5	0.1203	259.
9:32:30	1.378	81294.	-5428.	44572.	0.5	0.0812	259.
9:32:31	1.380	79977.	-5366.	44583.	0.5	0.0444	260.
9:32:32	1.381	78660.	-5302.	44595.	0.5	0.0252	260.
9:32:33	1.382	77341.	-5237.	44607.	0.5	0.0379	260.
9:32:34	1.383	76021.	-5171.	44618.	0.5	0.0747	260.
9:32:35	1.386	74699.	-5105.	44629.	0.5	0.1021	260.
9:32:36	1.390	73373.	-5039.	44639.	0.4	0.1013	260.
9:32:37	1.393	72045.	-4974.	44648.	0.4	0.1002	260.
9:32:38	1.396	70713.	-4909.	44656.	0.3	0.1112	260.
9:32:39	1.400	69377.	-4844.	44663.	0.2	0.1096	260.
9:32:40	1.403	68038.	-4779.	44668.	0.2	0.0865	260.
9:32:41	1.406	66696.	-4713.	44672.	0.1	0.0665	260.
9:32:42	1.408	65353.	-4646.	44675.	0.1	0.0598	260.
9:32:43	1.410	64007.	-4579.	44677.	0.1	0.0517	260.
9:32:44	1.411	62659.	-4512.	44679.	0.1	0.0451	260.
9:32:45	1.413	61310.	-4443.	44681.	0.1	0.0511	260.
9:32:46	1.415	59960.	-4375.	44684.	0.1	0.0659	260.
9:32:47	1.417	58607.	-4306.	44688.	0.2	0.0834	260.
9:32:48	1.420	57252.	-4236.	44691.	0.2	0.1014	260.
9:32:49	1.424	55894.	-4166.	44696.	0.2	0.1038	260.
9:32:50	1.427	54532.	-4095.	44699.	0.2	0.0753	260.
9:32:51	1.428	53168.	-4025.	44703.	0.1	0.0261	260.
9:32:52	1.429	51803.	-3953.	44706.	0.1	-.0050	260.
9:32:53	1.429	50438.	-3881.	44708.	0.1	0.0260	260.
9:32:54	1.430	49073.	-3809.	44711.	0.1	0.0688	260.
9:32:55	1.433	47705.	-3736.	44713.	0.1	0.0844	260.
9:32:56	1.436	46334.	-3663.	44715.	0.1	0.0947	260.

(CONTINUED)

F-16 AT 1.43M AT 46.7K MSL  
BOOM AT SITE 00 AT 0933 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
9:32:57	1.439	44961.	-3591.	44717.	0.1	0.1099 260.
9:32:58	1.443	43584.	-3518.	44719.	0.1	0.1088 260.
9:32:59	1.446	42203.	-3444.	44722.	0.1	0.0775 260.
9:33:00	1.448	40821.	-3370.	44723.	0.0	0.0429 260.
9:33:01	1.449	39435.	-3296.	44723.	0.0	0.0260 260.
9:33:02	1.450	38051.	-3220.	44722.	-0.1	0.0219 260.
9:33:03	1.451	36666.	-3145.	44720.	-0.1	0.0184 260.
9:33:04	1.451	35279.	-3068.	44718.	-0.1	0.0119 260.
9:33:05	1.451	33893.	-2992.	44714.	-0.1	-0.0002 260.
9:33:06	1.451	32506.	-2914.	44711.	-0.1	0.0032 260.
9:33:07	1.452	31119.	-2837.	44709.	-0.1	0.0409 260.
9:33:08	1.454	29731.	-2759.	44707.	-0.1	0.0853 260.
9:33:09	1.457	28340.	-2682.	44704.	-0.1	0.1070 260.
9:33:10	1.461	26946.	-2606.	44701.	-0.1	0.1083 260.

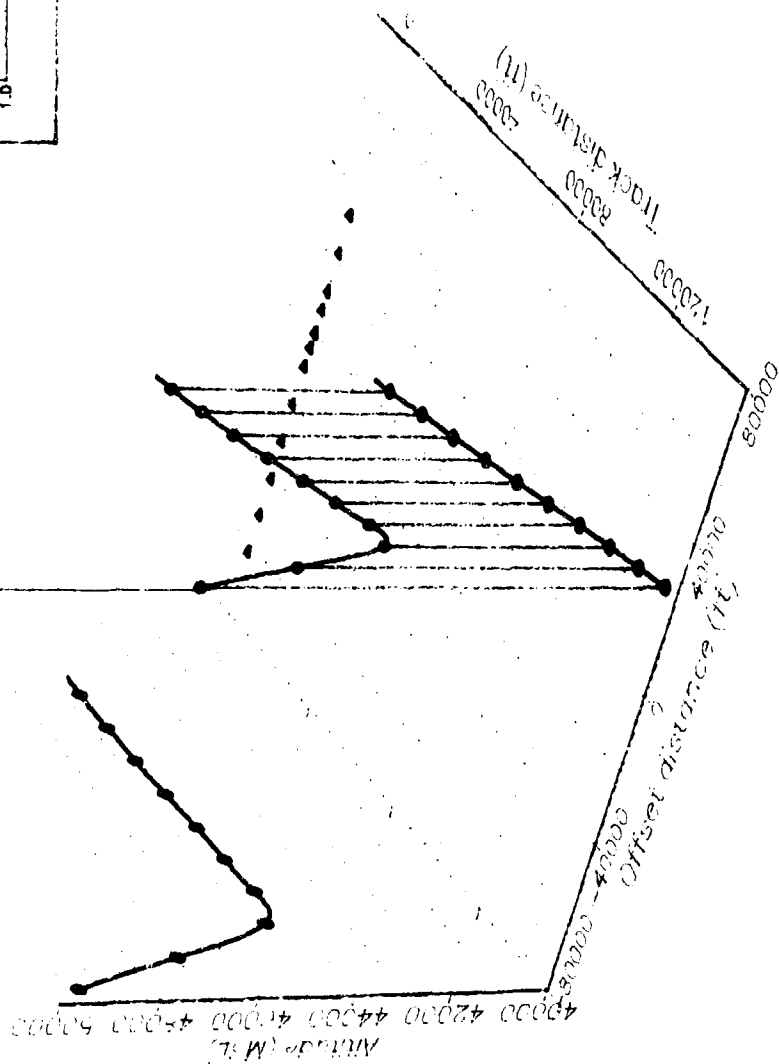
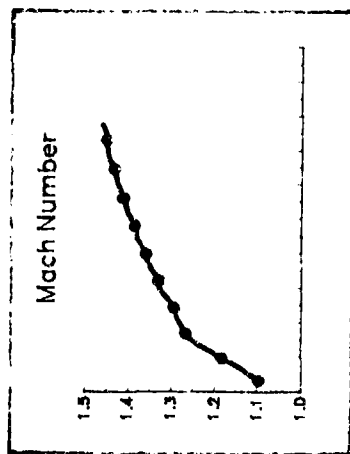


Figure B-23 F-16 on 5 Aug 87 at 0933

F-16 AT 1.19M AT 19.3K MSL

BOOM AT SITE 00 AT 0944 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:42:55	1.140	139793.	7.	25595.	-8.3	0.2032	255.
9:42:56	1.145	138587.	-25.	25422.	-8.1	0.2036	255.
9:42:57	1.150	137375.	-65.	25252.	-7.9	0.1999	254.
9:42:58	1.155	136156.	-112.	25086.	-7.7	0.1958	254.
9:42:59	1.160	134931.	-167.	24923.	-7.6	0.1778	254.
9:43:00	1.164	133700.	-229.	24763.	-7.4	0.1867	253.
9:43:01	1.170	132463.	-297.	24603.	-7.4	0.2145	253.
9:43:02	1.176	131220.	-370.	24442.	-7.5	0.1897	253.
9:43:03	1.180	129972.	-446.	24276.	-7.8	0.1136	253.
9:43:04	1.181	128721.	-525.	24104.	-8.1	0.0583	253.
9:43:05	1.183	127469.	-604.	23923.	-8.4	0.0776	253.
9:43:06	1.186	126216.	-682.	23735.	-8.8	0.1681	253.
9:43:07	1.193	124958.	-760.	23540.	-9.0	0.2526	253.
9:43:08	1.201	123693.	-838.	23341.	-9.0	0.2606	253.
9:43:09	1.208	122420.	-915.	23139.	-9.0	0.2203	253.
9:43:10	1.214	121139.	-993.	22939.	-8.9	0.1507	253.
9:43:11	1.218	119853.	-1070.	22741.	-8.7	0.1019	253.
9:43:12	1.221	118564.	-1147.	22547.	-8.5	0.1084	253.
9:43:13	1.225	117270.	-1224.	22357.	-8.3	0.1311	253.
9:43:14	1.229	115971.	-1302.	22169.	-8.2	0.1237	253.
9:43:15	1.232	114669.	-1381.	21984.	-8.1	0.0864	253.
9:43:16	1.234	113363.	-1460.	21800.	-8.0	0.0506	253.
9:43:17	1.234	112056.	-1539.	21615.	-8.0	0.0388	253.
9:43:18	1.235	110747.	-1619.	21432.	-8.0	0.0513	253.
9:43:19	1.237	109437.	-1698.	21250.	-7.8	0.0818	253.
9:43:20	1.239	108123.	-1775.	21071.	-7.6	0.1141	253.
9:43:21	1.242	106805.	-1849.	20899.	-7.3	0.1308	253.
9:43:22	1.245	105481.	-1919.	20736.	-6.8	0.1144	254.
9:43:23	1.248	104152.	-1983.	20583.	-6.3	0.0800	254.
9:43:24	1.249	102818.	-2039.	20443.	-5.7	0.0411	254.
9:43:25	1.249	101481.	-2086.	20317.	-5.2	0.0093	255.
9:43:26	1.248	100143.	-2124.	20203.	-4.6	-.0163	255.
9:43:27	1.247	98804.	-2154.	20102.	-4.1	-.0450	255.
9:43:28	1.245	97465.	-2176.	20013.	-3.6	-.0793	256.
9:43:29	1.242	96128.	-2193.	19935.	-3.1	-.1172	256.
9:43:30	1.238	94794.	-2207.	19868.	-2.7	-.1461	256.
9:43:31	1.233	93465.	-2220.	19809.	-2.3	-.1656	256.
9:43:32	1.228	92140.	-2232.	19759.	-2.0	-.1735	256.
9:43:33	1.223	90821.	-2246.	19716.	-1.7	-.1644	256.
9:43:34	1.218	89507.	-2261.	19680.	-1.5	-.1452	256.
9:43:35	1.214	88197.	-2279.	19649.	-1.3	-.1240	256.

(CONTINUED)

F-16 AT 1.19M AT 19.3K MSL  
BOOM AT SITE 00 AT 0944 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:43:36	1.210	86892.	-2300.	19621.	-1.2	-.1225	256.
9:43:37	1.207	85590.	-2324.	19596.	-1.1	-.1359	255.
9:43:38	1.202	84293.	-2350.	19573.	-1.0	-.1493	255.
9:43:39	1.198	83001.	-2379.	19551.	-1.0	-.1629	255.
9:43:40	1.193	81713.	-2409.	19529.	-0.9	-.1696	255.
9:43:41	1.188	80432.	-2442.	19509.	-0.9	-.1424	255.
9:43:42	1.184	79155.	-2475.	19490.	-0.8	-.0902	255.
9:43:43	1.182	77880.	-2511.	19472.	-0.8	-.0561	255.
9:43:44	1.181	76608.	-2549.	19456.	-0.7	-.0581	255.
9:43:45	1.179	75338.	-2588.	19441.	-0.6	-.0846	255.
9:43:46	1.176	74071.	-2629.	19428.	-0.5	-.1173	255.
9:43:47	1.172	72807.	-2670.	19417.	-0.4	-.1358	255.
9:43:48	1.168	71547.	-2710.	19408.	-0.4	-.1219	255.
9:43:49	1.165	70292.	-2750.	19402.	-0.3	-.0724	255.
9:43:50	1.164	69038.	-2790.	19396.	-0.2	-.0026	255.
9:43:51	1.165	67785.	-2830.	19392.	-0.2	0.0525	255.
9:43:52	1.167	66530.	-2870.	19389.	-0.1	0.0753	255.
9:43:53	1.169	65273.	-2910.	19387.	-0.1	0.0696	255.
9:43:54	1.171	64014.	-2951.	19386.	0.0	0.0449	255.
9:43:55	1.172	62753.	-2993.	19385.	0.0	0.0152	255.
9:43:56	1.172	61492.	-3035.	19386.	0.0	-.0109	255.
9:43:57	1.171	60231.	-3077.	19387.	0.1	-.0246	255.
9:43:58	1.170	58971.	-3121.	19390.	0.1	-.0176	255.
9:43:59	1.170	57711.	-3164.	19392.	0.1	0.0085	255.
9:44:00	1.171	56452.	-3209.	19395.	0.1	0.0339	255.
9:44:01	1.172	55191.	-3254.	19397.	0.1	0.0390	254.
9:44:02	1.173	53929.	-3300.	19399.	0.1	0.0285	254.
9:44:03	1.174	52666.	-3347.	19401.	0.1	0.0206	254.
9:44:04	1.174	51403.	-3395.	19403.	0.1	0.0191	254.
9:44:05	1.175	50139.	-3442.	19405.	0.1	0.0171	254.
9:44:06	1.175	48874.	-3490.	19407.	0.1	0.0120	254.
9:44:07	1.176	47609.	-3538.	19409.	0.1	0.0055	254.
9:44:08	1.176	46344.	-3586.	19410.	0.0	0.0097	254.
9:44:09	1.176	45078.	-3634.	19409.	-0.1	0.0336	254.
9:44:10	1.178	43812.	-3681.	19407.	-0.1	0.0418	254.
9:44:11	1.178	42544.	-3728.	19404.	-0.1	0.0103	254.
9:44:12	1.178	41276.	-3775.	19401.	-0.1	-.0260	254.
9:44:13	1.177	40008.	-3821.	19398.	-0.1	-.0316	254.
9:44:14	1.177	38741.	-3866.	19396.	-0.1	-.0060	255.
9:44:15	1.177	37475.	-3911.	19395.	0.0	0.0412	255.
9:44:16	1.179	36207.	-3956.	19395.	0.0	0.1020	255.

(CONTINUED)

F-16 AT 1.19M AT 19.3K MSL  
BOOM AT SITE 00 AT 0944 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:44:17	1.183	34936.	-4001.	19394.	-0.1	0.1220	255.
9:44:18	1.186	33662.	-4046.	19392.	-0.1	0.0679	254.
9:44:19	1.186	32385.	-4093.	19389.	-0.2	-.0178	254.
9:44:20	1.185	31109.	-4139.	19384.	-0.2	-.0766	254.
9:44:21	1.183	29835.	-4184.	19379.	-0.2	-.0755	255.
9:44:22	1.181	28563.	-4229.	19374.	-0.2	-.0362	255.
9:44:23	1.181	27292.	-4272.	19371.	-0.1	0.0190	255.
9:44:24	1.182	26021.	-4316.	19368.	-0.1	0.0685	255.
9:44:25	1.184	24748.	-4360.	19366.	-0.1	0.0791	255.
9:44:26	1.186	23472.	-4405.	19365.	0.0	0.0414	255.
9:44:27	1.187	22195.	-4450.	19364.	0.0	0.0043	255.
9:44:28	1.187	20918.	-4494.	19363.	-0.1	-.0039	255.
9:44:29	1.187	19641.	-4536.	19362.	-0.1	0.0062	255.
9:44:30	1.187	18363.	-4578.	19360.	-0.1	0.0251	255.
9:44:31	1.188	17085.	-4619.	19359.	-0.1	0.0294	255.
9:44:32	1.189	15806.	-4659.	19356.	-0.1	0.0111	255.
9:44:33	1.189	14526.	-4700.	19354.	-0.1	-.0135	255.
9:44:34	1.188	13247.	-4741.	19352.	-0.1	-.0277	255.
9:44:35	1.187	11969.	-4782.	19350.	-0.1	-.0182	255.
9:44:36	1.187	10691.	-4824.	19349.	0.0	0.0028	255.
9:44:37	1.187	9413.	-4865.	19349.	0.0	0.0213	255.
9:44:38	1.188	8135.	-4906.	19351.	0.1	0.0269	255.
9:44:39	1.189	6856.	-4946.	19353.	0.1	0.0173	255.
9:44:40	1.189	5576.	-4986.	19357.	0.2	0.0048	255.
9:44:41	1.189	4296.	-5023.	19362.	0.2	-.0044	255.
9:44:42	1.189	3015.	-5058.	19368.	0.3	-.0032	255.
9:44:43	1.189	1735.	-5091.	19374.	0.3	-.0021	255.

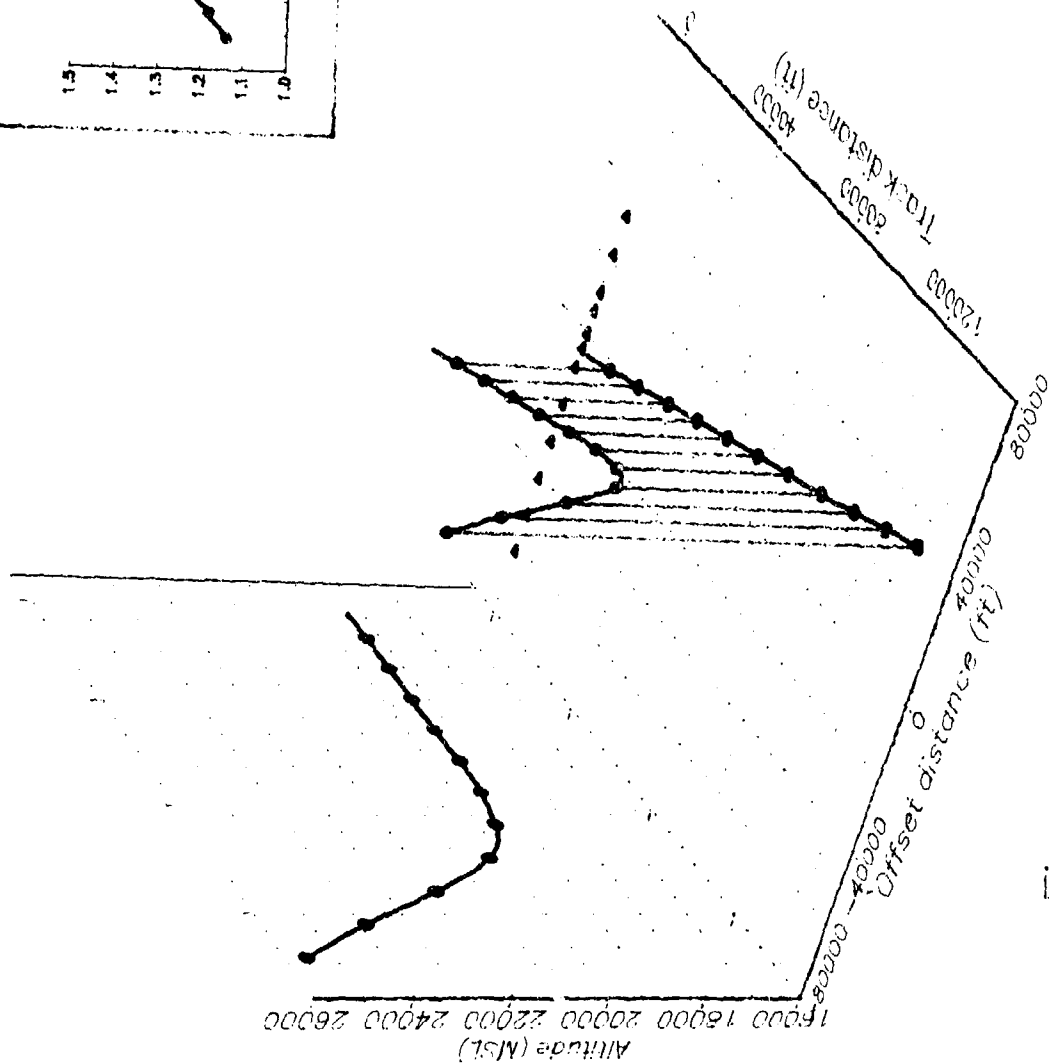
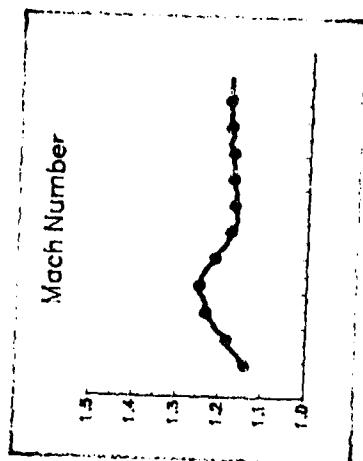


Figure B-24. F-16 on 5 Aug 87 at 0944

F-16 AT 1.13M AT 14.1K MSL  
BOOM AT SITE 00 AT 1144 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:42:20	1.155	149258.	-3539.	19494.	-8.9	0.0373	256.
11:42:21	1.156	148027.	-3563.	19306.	-8.6	0.0378	255.
11:42:22	1.158	146793.	-3588.	19122.	-8.4	0.0233	255.
11:42:23	1.158	145558.	-3614.	18944.	-8.1	-.0236	255.
11:42:24	1.155	144323.	-3640.	18771.	-7.8	-.0682	255.
11:42:25	1.152	143090.	-3667.	18604.	-7.6	-.0743	255.
11:42:26	1.148	141858.	-3694.	18444.	-7.3	-.0740	255.
11:42:27	1.144	140627.	-3721.	18290.	-7.0	-.0792	255.
11:42:28	1.141	139398.	-3747.	18143.	-6.7	-.0759	255.
11:42:29	1.137	138171.	-3774.	18002.	-6.4	-.0430	255.
11:42:30	1.135	136945.	-3800.	17867.	-6.2	0.0090	255.
11:42:31	1.134	135718.	-3827.	17738.	-5.9	0.0322	255.
11:42:32	1.133	134490.	-3854.	17613.	-5.7	0.0057	255.
11:42:33	1.132	133261.	-3880.	17493.	-5.5	-.0353	255.
11:42:34	1.129	132033.	-3905.	17377.	-5.4	-.0474	255.
11:42:35	1.127	130806.	-3929.	17264.	-5.2	-.0385	256.
11:42:36	1.125	129580.	-3952.	17154.	-5.1	-.0251	256.
11:42:37	1.123	128354.	-3973.	17047.	-4.9	-.0153	256.
11:42:38	1.122	127129.	-3993.	16944.	-4.8	-.0120	256.
11:42:39	1.122	125903.	-4011.	16845.	-4.6	-.0041	256.
11:42:40	1.122	124678.	-4027.	16749.	-4.4	0.0241	256.
11:42:41	1.123	123451.	-4041.	16659.	-4.1	0.0781	256.
11:42:42	1.126	122222.	-4053.	16573.	-3.9	0.1028	256.
11:42:43	1.128	120988.	-4062.	16492.	-3.7	0.0776	256.
11:42:44	1.130	119753.	-4069.	16413.	-3.6	0.0582	256.
11:42:45	1.132	118515.	-4073.	16336.	-3.6	0.0732	257.
11:42:46	1.135	117275.	-4074.	16260.	-3.6	0.1086	257.
11:42:47	1.138	116031.	-4072.	16182.	-3.7	0.1214	257.
11:42:48	1.141	114784.	-4067.	16100.	-3.9	0.1042	257.
11:42:49	1.144	113534.	-4060.	16013.	-4.1	0.0699	257.
11:42:50	1.145	112282.	-4051.	15920.	-4.4	0.0431	257.
11:42:51	1.146	111029.	-4040.	15822.	-4.7	0.0466	257.
11:42:52	1.147	109775.	-4027.	15718.	-4.9	0.0622	257.
11:42:53	1.148	108519.	-4012.	15609.	-5.1	0.0849	257.
11:42:54	1.151	107261.	-3996.	15497.	-5.2	0.0943	257.
11:42:55	1.153	106000.	-3980.	15383.	-5.2	0.0795	257.
11:42:56	1.154	104736.	-3965.	15268.	-5.3	0.0547	257.
11:42:57	1.155	103471.	-3949.	15153.	-5.3	0.0384	257.
11:42:58	1.156	102205.	-3934.	15037.	-5.3	0.0440	257.
11:42:59	1.156	100937.	-3919.	14920.	-5.3	0.0675	257.
11:43:00	1.158	99667.	-3903.	14802.	-5.4	0.0863	257.

(CONTINUED)



F-16 AT 1.13M AT 14.1K MSL  
BOOM AT SITE 00 AT 1144 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:43:01	1.160	98395.	-3887.	14683.	-5.3	0.0835	257.
11:43:02	1.162	97119.	-3870.	14566.	-5.2	0.0604	257.
11:43:03	1.163	95842.	-3853.	14453.	-4.9	0.0291	257.
11:43:04	1.163	94563.	-3836.	14349.	-4.4	0.0049	257.
11:43:05	1.163	93282.	-3820.	14259.	-3.7	-.0214	257.
11:43:06	1.162	92001.	-3804.	14186.	-2.9	-.0391	257.
11:43:07	1.161	90721.	-3790.	14132.	-2.0	-.0417	257.
11:43:08	1.160	89441.	-3776.	14097.	-1.2	-.0314	257.
11:43:09	1.159	88163.	-3762.	14077.	-0.6	-.0208	257.
11:43:10	1.158	86884.	-3747.	14068.	-0.2	-.0219	257.
11:43:11	1.158	85607.	-3732.	14066.	0.0	-.0288	257.
11:43:12	1.157	84330.	-3716.	14067.	0.1	-.0351	257.
11:43:13	1.156	83054.	-3699.	14069.	0.1	-.0380	257.
11:43:14	1.154	81780.	-3680.	14072.	0.1	-.0399	258.
11:43:15	1.153	80507.	-3661.	14075.	0.1	-.0434	258.
11:43:16	1.152	79235.	-3640.	14078.	0.2	-.0416	258.
11:43:17	1.151	77965.	-3619.	14083.	0.2	-.0366	258.
11:43:18	1.150	76696.	-3598.	14087.	0.2	-.0336	258.
11:43:19	1.149	75428.	-3576.	14091.	0.2	-.0319	258.
11:43:20	1.148	74161.	-3554.	14095.	0.2	-.0280	258.
11:43:21	1.147	72895.	-3532.	14099.	0.2	-.0273	258.
11:43:22	1.146	71630.	-3510.	14102.	0.2	-.0356	258.
11:43:23	1.145	70366.	-3488.	14106.	0.2	-.0445	258.
11:43:24	1.144	69103.	-3465.	14111.	0.2	-.0444	258.
11:43:25	1.143	67842.	-3442.	14115.	0.2	-.0320	258.
11:43:26	1.142	66581.	-3418.	14120.	0.2	-.0203	258.
11:43:27	1.141	65322.	-3394.	14124.	0.2	-.0235	258.
11:43:28	1.140	64063.	-3370.	14126.	0.1	-.0333	258.
11:43:29	1.139	62805.	-3346.	14128.	0.0	-.0396	258.
11:43:30	1.138	61549.	-3322.	14129.	0.0	-.0384	258.
11:43:31	1.137	60293.	-3298.	14129.	0.0	-.0351	258.
11:43:32	1.136	59039.	-3275.	14129.	0.1	-.0271	258.
11:43:33	1.136	57786.	-3252.	14131.	0.1	0.0074	258.
11:43:34	1.137	56532.	-3229.	14135.	0.2	0.0346	258.
11:43:35	1.137	55278.	-3206.	14140.	0.3	-.0055	258.
11:43:36	1.136	54024.	-3182.	14147.	0.3	-.0732	258.
11:43:37	1.133	52772.	-3158.	14154.	0.3	-.0972	258.
11:43:38	1.131	51523.	-3132.	14160.	0.3	-.0557	258.
11:43:39	1.130	50275.	-3106.	14165.	0.2	0.0061	258.
11:43:40	1.131	49028.	-3079.	14170.	0.2	0.0445	258.
11:43:41	1.132	47779.	-3053.	14173.	0.1	0.0423	258.

(CONTINUED)

F-16 AT 1.13M AT 14.1K MSL  
BOOM AT SITE 00 AT 1144 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:43:42	1.133	46529.	-3028.	14176.	0.1	0.0093	258.
11:43:43	1.133	45279.	-3003.	14179.	0.2	-.0282	258.
11:43:44	1.132	44029.	-2979.	14183.	0.2	-.0556	258.
11:43:45	1.130	42782.	-2955.	14186.	0.1	-.0677	258.
11:43:46	1.128	41536.	-2931.	14188.	0.0	-.0545	258.
11:43:47	1.127	40292.	-2908.	14188.	0.0	-.0201	258.
11:43:48	1.127	39049.	-2884.	14186.	-0.1	0.0065	258.
11:43:49	1.127	37805.	-2859.	14185.	0.0	0.0282	258.
11:43:50	1.128	36561.	-2835.	14185.	0.0	0.0317	258.
11:43:51	1.129	35316.	-2810.	14186.	0.1	0.0098	258.
11:43:52	1.129	34070.	-2785.	14189.	0.1	-.0112	258.
11:43:53	1.128	32825.	-2759.	14192.	0.2	-.0469	258.
11:43:54	1.126	31581.	-2732.	14196.	0.2	-.0902	258.
11:43:55	1.123	30340.	-2703.	14199.	0.1	-.0659	258.
11:43:56	1.123	29101.	-2674.	14202.	0.1	0.0221	258.
11:43:57	1.124	27862.	-2645.	14205.	0.1	0.0914	258.
11:43:58	1.127	26619.	-2617.	14209.	0.2	0.0972	258.
11:43:59	1.130	25374.	-2591.	14212.	0.2	0.0496	258.
11:44:00	1.130	24127.	-2566.	14216.	0.2	-.0300	258.
11:44:01	1.128	22881.	-2542.	14220.	0.2	-.1098	258.
11:44:02	1.124	21639.	-2517.	14223.	0.2	-.1460	258.
11:44:03	1.120	20400.	-2489.	14227.	0.2	-.1028	258.
11:44:04	1.118	19166.	-2459.	14230.	0.2	-.0261	258.
11:44:05	1.118	17932.	-2428.	14233.	0.1	0.0317	258.
11:44:06	1.120	16697.	-2397.	14236.	0.1	0.0611	258.
11:44:07	1.122	15460.	-2365.	14239.	0.1	0.0531	258.
11:44:08	1.123	14222.	-2333.	14241.	0.1	0.0198	258.
11:44:09	1.123	12983.	-2302.	14244.	0.1	-.0020	258.
11:44:10	1.123	11744.	-2271.	14247.	0.1	-.0070	258.
11:44:11	1.123	10505.	-2239.	14250.	0.2	0.0046	258.
11:44:12	1.123	9266.	-2208.	14254.	0.2	0.0250	258.
11:44:13	1.124	8027.	-2178.	14260.	0.3	0.0180	258.
11:44:14	1.124	6787.	-2148.	14266.	0.3	0.0063	258.
11:44:15	1.124	5546.	-2119.	14273.	0.3	0.0048	258.

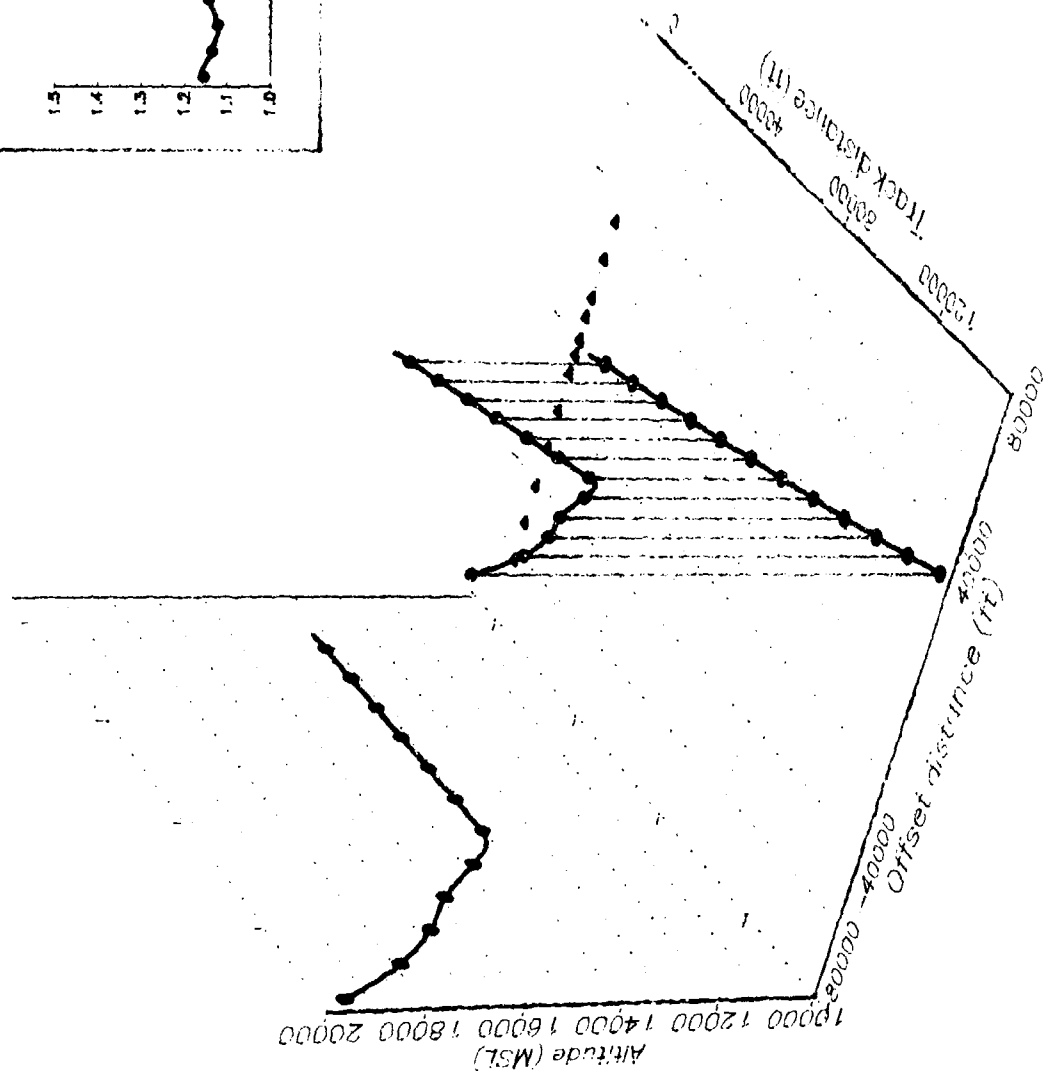
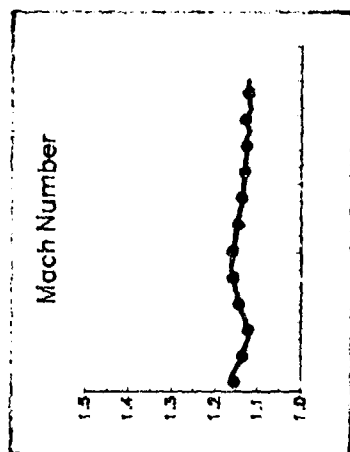


Figure B-25. F-16 on 5 Aug 87 at 1144

F-16 AT 1.12M AT 13.8K MSL  
BOOM AT SITE 00 AT 1154 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:52:38	1.141	147439.	-7228.	17433.	-9.6	0.1183	265.
11:52:39	1.143	146217.	-7058.	17234.	-9.0	0.1227	265.
11:52:40	1.145	144989.	-6891.	17047.	-8.4	0.1212	265.
11:52:41	1.148	143754.	-6726.	16872.	-7.8	0.1251	265.
11:52:42	1.152	142514.	-6564.	16710.	-7.2	0.1606	264.
11:52:43	1.157	141266.	-6404.	16561.	-6.5	0.1859	264.
11:52:44	1.162	140011.	-6248.	16426.	-5.7	0.1432	264.
11:52:45	1.164	138749.	-6095.	16309.	-4.9	0.0606	264.
11:52:46	1.165	137483.	-5945.	16212.	-3.9	0.0047	264.
11:52:47	1.165	136215.	-5797.	16135.	-3.0	-.0135	264.
11:52:48	1.164	134946.	-5650.	16079.	-2.1	-.0218	264.
11:52:49	1.163	133678.	-5504.	16041.	-1.3	-.0565	264.
11:52:50	1.161	132411.	-5359.	16021.	-0.6	-.0756	264.
11:52:51	1.160	131146.	-5213.	16014.	-0.1	-.0243	264.
11:52:52	1.160	129882.	-5067.	16017.	0.3	0.0325	264.
11:52:53	1.161	128617.	-4921.	16026.	0.5	0.0400	264.
11:52:54	1.162	127351.	-4776.	16037.	0.4	0.0129	264.
11:52:55	1.162	126084.	-4631.	16043.	0.1	-.0283	264.
11:52:56	1.161	124818.	-4486.	16041.	-0.4	-.0443	264.
11:52:57	1.159	123554.	-4341.	16024.	-1.2	-.0381	264.
11:52:58	1.158	122291.	-4196.	15987.	-2.2	-.0343	264.
11:52:59	1.157	121030.	-4051.	15927.	-3.3	-.0318	264.
11:53:00	1.156	119771.	-3907.	15841.	-4.5	-.0089	264.
11:53:01	1.156	118515.	-3762.	15727.	-5.8	0.0562	264.
11:53:02	1.158	117259.	-3617.	15585.	-7.1	0.1224	264.
11:53:03	1.161	116003.	-3471.	15416.	-8.3	0.1616	264.
11:53:04	1.165	114746.	-3324.	15221.	-9.3	0.1752	264.
11:53:05	1.169	113486.	-3175.	15004.	-10.2	0.1540	264.
11:53:06	1.172	112225.	-3023.	14772.	-10.7	0.1066	264.
11:53:07	1.174	110962.	-2869.	14532.	-10.7	0.0425	264.
11:53:08	1.174	109697.	-2712.	14296.	-10.3	-.0153	264.
11:53:09	1.173	108429.	-2555.	14074.	-9.4	-.0136	264.
11:53:10	1.173	107158.	-2401.	13878.	-8.0	0.0276	264.
11:53:11	1.173	105881.	-2253.	13715.	-6.4	0.0542	263.
11:53:12	1.175	104597.	-2114.	13590.	-4.7	0.0394	263.
11:53:13	1.175	103307.	-1986.	13501.	-3.2	-.0132	262.
11:53:14	1.174	102015.	-1871.	13443.	-2.0	-.0529	262.
11:53:15	1.172	100723.	-1767.	13409.	-1.1	-.0706	261.
11:53:16	1.170	99432.	-1675.	13392.	-0.4	-.0743	261.
11:53:17	1.167	98143.	-1591.	13387.	0.0	-.0794	260.
11:53:18	1.165	96856.	-1516.	13392.	0.4	-.0754	260.

(CONTINUED)

F-16 AT 1.12M AT 13.8K MSL  
BOOM AT SITE 00 AT 1154 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:53:19	1.163	95570.	-1446.	13403.	0.6	-.0955	260.
11:53:20	1.159	94288.	-1380.	13420.	0.8	-.1420	260.
11:53:21	1.155	93011.	-1318.	13440.	0.9	-.1475	260.
11:53:22	1.152	91737.	-1256.	13460.	0.9	-.0765	260.
11:53:23	1.151	90467.	-1194.	13479.	0.7	-.0041	260.
11:53:24	1.150	89196.	-1134.	13493.	0.5	-.0278	260.
11:53:25	1.149	87927.	-1073.	13501.	0.3	-.0829	260.
11:53:26	1.146	86659.	-1013.	13505.	0.1	-.0851	260.
11:53:27	1.144	85395.	-951.	13505.	-0.1	-.0561	260.
11:53:28	1.143	84132.	-889.	13502.	-0.1	-.0369	260.
11:53:29	1.142	82871.	-828.	13500.	-0.1	-.0361	260.
11:53:30	1.141	81611.	-766.	13500.	0.0	-.0396	260.
11:53:31	1.140	80352.	-705.	13502.	0.2	-.0315	260.
11:53:32	1.139	79094.	-645.	13508.	0.3	-.0166	260.
11:53:33	1.138	77836.	-584.	13517.	0.5	-.0241	260.
11:53:34	1.137	76580.	-524.	13528.	0.5	-.0548	260.
11:53:35	1.135	75325.	-463.	13541.	0.6	-.0817	260.
11:53:36	1.133	74073.	-402.	13553.	0.5	-.0813	260.
11:53:37	1.131	72823.	-340.	13564.	0.5	-.0435	260.
11:53:38	1.130	71575.	-278.	13573.	0.3	0.0028	260.
11:53:39	1.131	70326.	-216.	13579.	0.2	0.0044	260.
11:53:40	1.130	69078.	-153.	13582.	0.1	-.0308	260.
11:53:41	1.129	67831.	-90.	13582.	0.0	-.0683	260.
11:53:42	1.127	66585.	-26.	13580.	-0.1	-.0745	260.
11:53:43	1.125	65342.	37.	13577.	-0.1	-.0397	260.
11:53:44	1.125	64101.	101.	13574.	-0.1	-.0002	260.
11:53:45	1.125	62859.	163.	13572.	-0.1	0.0090	260.
11:53:46	1.125	61617.	224.	13572.	0.0	-.0064	260.
11:53:47	1.124	60375.	284.	13573.	0.1	-.0358	260.
11:53:48	1.123	59135.	344.	13576.	0.2	-.0505	260.
11:53:49	1.122	57896.	404.	13581.	0.3	-.0502	260.
11:53:50	1.120	56658.	465.	13587.	0.3	-.0401	260.
11:53:51	1.119	55422.	525.	13595.	0.4	-.0200	260.
11:53:52	1.119	54186.	586.	13604.	0.5	-.0044	260.
11:53:53	1.119	52951.	646.	13615.	0.5	0.0059	260.
11:53:54	1.119	51716.	706.	13626.	0.5	0.0138	260.
11:53:55	1.120	50480.	767.	13637.	0.5	0.0102	260.
11:53:56	1.120	49244.	828.	13646.	0.4	-.0280	260.
11:53:57	1.118	48008.	890.	13654.	0.3	-.0698	260.
11:53:58	1.116	46775.	954.	13659.	0.2	-.0396	260.
11:53:59	1.116	45543.	1018.	13662.	0.1	0.0286	260.

(CONTINUED)

F-16 AT 1.12M AT 13.8K MSL  
BOOM AT SITE 00 AT 1154 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
11:54:00	1.117	44311.	1081.	13662.	-0.1	0.0440 260.
11:54:01	1.118	43077.	1144.	13659.	-0.1	-.0232 260.
11:54:02	1.116	41843.	1207.	13656.	-0.2	-.0752 260.
11:54:03	1.114	40612.	1269.	13651.	-0.2	-.0623 260.
11:54:04	1.113	39383.	1332.	13646.	-0.3	-.0109 260.
11:54:05	1.113	38154.	1394.	13640.	-0.3	0.0225 260.
11:54:06	1.114	36925.	1457.	13632.	-0.4	0.0250 260.
11:54:07	1.115	35695.	1521.	13623.	-0.5	0.0287 260.
11:54:08	1.115	34464.	1587.	13613.	-0.5	0.0222 260.
11:54:09	1.116	33233.	1653.	13602.	-0.5	-.0136 260.
11:54:10	1.115	32002.	1721.	13591.	-0.5	-.0274 260.
11:54:11	1.115	30771.	1789.	13580.	-0.5	0.0066 260.
11:54:12	1.115	29541.	1856.	13568.	-0.6	0.0354 260.
11:54:13	1.116	28309.	1923.	13556.	-0.6	0.0160 260.
11:54:14	1.116	27077.	1989.	13542.	-0.7	-.0241 260.
11:54:15	1.115	25846.	2056.	13527.	-0.7	-.0490 260.
11:54:16	1.113	24616.	2123.	13512.	-0.7	-.0331 260.
11:54:17	1.113	23388.	2192.	13497.	-0.7	-.0116 260.
11:54:18	1.112	22159.	2262.	13484.	-0.5	0.0023 260.
11:54:19	1.113	20931.	2332.	13474.	-0.4	0.0187 260.
11:54:20	1.113	19702.	2402.	13468.	-0.2	0.0201 260.
11:54:21	1.114	18473.	2473.	13466.	0.0	0.0112 260.
11:54:22	1.114	17243.	2544.	13467.	0.2	0.0117 260.
11:54:23	1.115	16013.	2616.	13472.	0.3	0.0122 260.
11:54:24	1.115	14783.	2688.	13480.	0.4	-.0141 260.
11:54:25	1.114	13553.	2760.	13488.	0.4	-.0408 260.
11:54:26	1.113	12324.	2832.	13496.	0.4	-.0371 260.
11:54:27	1.112	11096.	2905.	13503.	0.3	-.0108 260.
11:54:28	1.112	9869.	2978.	13509.	0.2	0.0072 260.
11:54:29	1.112	8642.	3050.	13513.	0.1	0.0234 260.
11:54:30	1.113	7413.	3122.	13515.	0.1	0.0260 260.
11:54:31	1.114	6184.	3193.	13516.	0.0	0.0118 260.
11:54:32	1.114	4955.	3264.	13516.	0.0	0.0088 260.

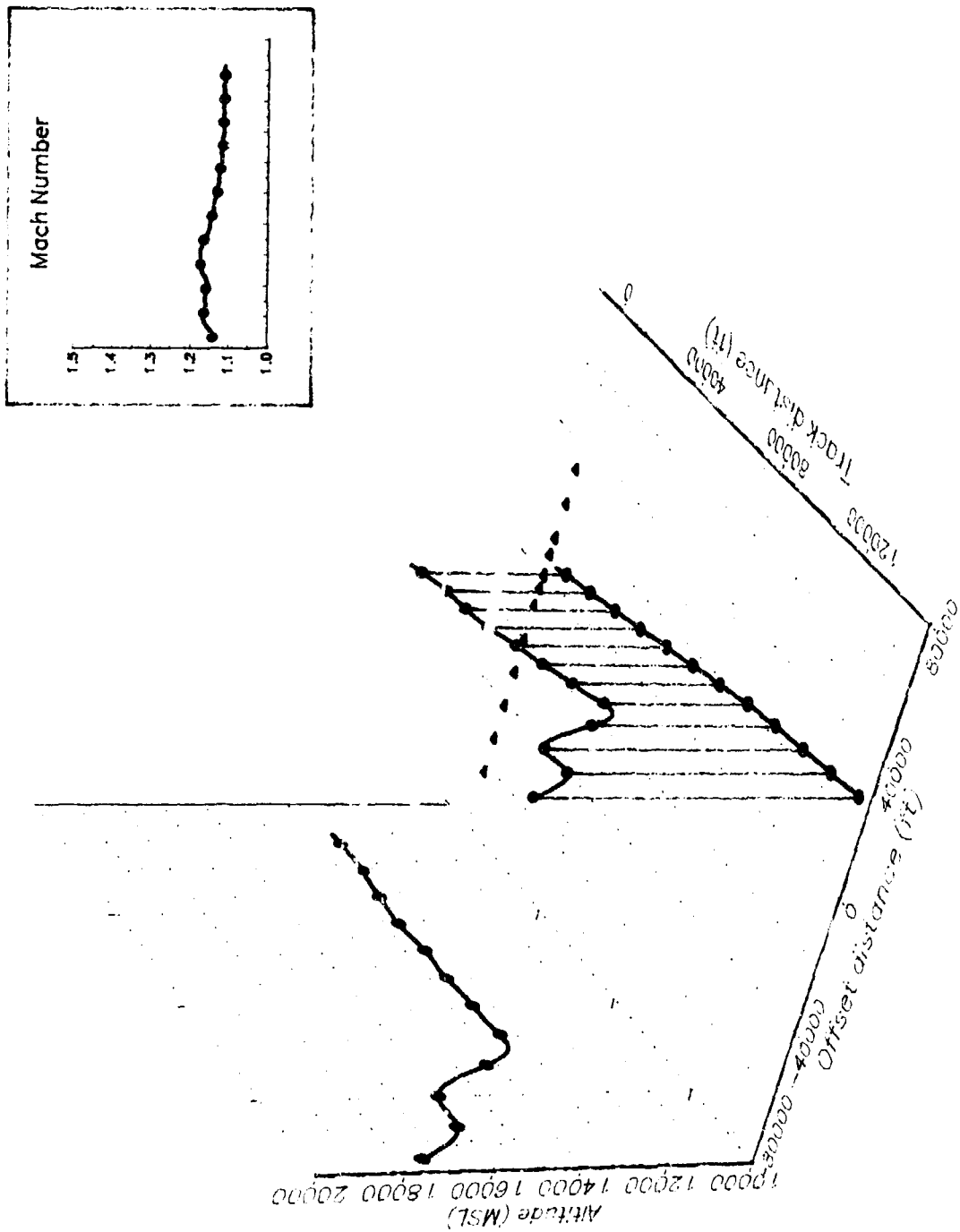


Figure R-26. F-16 on 5 Aug 87 at 1154

F-16 AT 1.25M AT 30K MSL  
BOOM AT SITE 00 AT 1204 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:02:40	1.221	147561.	-780.	29089.	-0.2	-.0309	258.
12:02:41	1.220	146289.	-763.	29086.	0.0	-.0314	257.
12:02:42	1.219	145019.	-750.	29087.	0.1	-.0324	257.
12:02:43	1.219	143750.	-742.	29091.	0.3	-.0165	257.
12:02:44	1.219	142481.	-739.	29098.	0.4	0.0154	257.
12:02:45	1.220	141212.	-742.	29107.	0.4	0.0559	256.
12:02:46	1.222	139941.	-749.	29118.	0.5	0.0822	256.
12:02:47	1.225	138668.	-763.	29129.	0.5	0.0840	256.
12:02:48	1.227	137392.	-781.	29141.	0.6	0.0742	256.
12:02:49	1.229	136114.	-803.	29155.	0.6	0.0414	256.
12:02:50	1.230	134835.	-828.	29169.	0.7	0.0034	255.
12:02:51	1.230	133555.	-857.	29186.	0.8	-.0086	255.
12:02:52	1.230	132276.	-887.	29204.	0.8	0.0078	255.
12:02:53	1.230	130997.	-919.	29223.	0.9	0.0153	255.
12:02:54	1.231	129718.	-952.	29244.	1.0	0.0174	255.
12:02:55	1.232	128437.	-986.	29266.	1.0	0.0141	255.
12:02:56	1.232	127157.	-1020.	29289.	1.0	0.0014	255.
12:02:57	1.232	125876.	-1053.	29312.	1.1	-.0138	255.
12:02:58	1.232	124596.	-1086.	29337.	1.1	-.0135	255.
12:02:59	1.232	123317.	-1117.	29363.	1.1	0.0053	255.
12:03:00	1.233	122037.	-1149.	29388.	1.2	0.0274	255.
12:03:01	1.234	120756.	-1180.	29414.	1.2	0.0409	255.
12:03:02	1.235	119474.	-1212.	29441.	1.2	0.0540	255.
12:03:03	1.237	118189.	-1242.	29467.	1.2	0.0557	255.
12:03:04	1.239	116904.	-1272.	29495.	1.2	0.0460	255.
12:03:05	1.241	115617.	-1299.	29523.	1.3	0.0346	255.
12:03:06	1.242	114329.	-1322.	29551.	1.3	0.0152	256.
12:03:07	1.242	113040.	-1340.	29580.	1.2	-.0040	256.
12:03:08	1.242	111751.	-1353.	29607.	1.2	-.0072	256.
12:03:09	1.242	110462.	-1360.	29633.	1.1	-.0033	257.
12:03:10	1.242	109173.	-1359.	29657.	1.0	-.0142	257.
12:03:11	1.242	107885.	-1352.	29678.	0.8	-.0002	257.
12:03:12	1.242	106596.	-1338.	29695.	0.7	0.0263	257.
12:03:13	1.243	105307.	-1318.	29709.	0.5	0.0459	258.
12:03:14	1.245	104016.	-1292.	29719.	0.4	0.0675	258.
12:03:15	1.248	102723.	-1261.	29727.	0.3	0.0883	258.
12:03:16	1.250	101427.	-1224.	29732.	0.2	0.0660	258.
12:03:17	1.252	100130.	-1183.	29737.	0.2	0.0112	259.
12:03:18	1.251	98832.	-1139.	29742.	0.2	-.0416	259.
12:03:19	1.250	97535.	-1091.	29748.	0.3	-.0246	259.
12:03:20	1.250	96240.	-1040.	29755.	0.4	0.0378	259.

(CONTINUED)



F-16 AT 1.25M AT 30K MSL  
BOOM AT SITE 00 AT 1204 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:03:21	1.252	94943.	-988.	29764.	0.4	0.0635	259.
12:03:22	1.254	93644.	-936.	29775.	0.5	0.0373	259.
12:03:23	1.255	92344.	-884.	29788.	0.6	0.0089	259.
12:03:24	1.255	91044.	-833.	29802.	0.6	0.0033	259.
12:03:25	1.255	89744.	-782.	29816.	0.6	0.0182	259.
12:03:26	1.256	88443.	-732.	29827.	0.4	0.0316	259.
12:03:27	1.257	87141.	-682.	29835.	0.3	0.0292	259.
12:03:28	1.258	85838.	-632.	29839.	0.1	0.0167	259.
12:03:29	1.258	84534.	-581.	29838.	-0.1	0.0159	259.
12:03:30	1.259	82447.	-499.	29828.	-0.4	0.0376	259.
12:03:31	1.260	81142.	-447.	29818.	-0.4	0.0398	259.
12:03:32	1.261	79835.	-396.	29808.	-0.4	0.0185	259.
12:03:33	1.262	78527.	-346.	29799.	-0.3	0.0118	259.
12:03:34	1.262	77219.	-296.	29792.	-0.2	0.0338	259.
12:03:35	1.263	75910.	-247.	29789.	-0.1	0.0470	259.
12:03:36	1.265	74599.	-199.	29787.	0.0	0.0523	259.
12:03:37	1.267	73287.	-152.	29787.	0.0	0.0482	259.
12:03:38	1.268	71973.	-105.	29788.	0.1	0.0349	259.
12:03:39	1.269	70658.	-58.	29789.	0.1	0.0143	259.
12:03:40	1.269	69343.	-11.	29791.	0.1	-0.0097	259.
12:03:41	1.268	68028.	37.	29793.	0.1	-0.0276	259.
12:03:42	1.268	66713.	85	29794.	0.1	-0.0129	259.
12:03:43	1.268	65400.	134.	29796.	0.1	0.0269	259.
12:03:44	1.269	64085.	183.	29797.	0.1	0.0587	259.
12:03:45	1.271	62768.	232.	29799.	0.1	0.0628	259.
12:03:46	1.273	61449.	280.	29802.	0.1	0.0346	259.
12:03:47	1.273	60130.	328.	29806.	0.2	-0.0026	259.
12:03:48	1.273	58811.	377.	29810.	0.2	-0.0061	259.
12:03:49	1.273	57491.	425.	29817.	0.3	0.0166	259.
12:03:50	1.274	56171.	473.	29825.	0.4	0.0236	259.
12:03:51	1.275	54851.	521.	29834.	0.4	0.0092	259.
12:03:52	1.275	53530.	570.	29843.	0.4	-0.0034	259.
12:03:53	1.275	52209.	620.	29853.	0.4	-0.0043	259.
12:03:54	1.275	50889.	671.	29863.	0.4	0.0148	259.
12:03:55	1.276	49567.	722.	29872.	0.4	0.0273	259.
12:03:56	1.276	48246.	774.	29879.	0.3	0.0258	259.
12:03:57	1.277	46923.	826.	29885.	0.2	0.0282	259.
12:03:58	1.278	45599.	877.	29890.	0.2	0.0163	259.
12:03:59	1.278	44275.	927.	29893.	0.1	0.0117	259.
12:04:00	1.279	42950.	977.	29896.	0.1	0.0387	259.
12:04:01	1.281	41624.	1027.	29898.	0.1	0.0741	259.

(CONTINUED)

F-16 AT 1.25M AT 30K MSL

BOOM AT SITE 00 AT 1204 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:04:02	1.283	40296.	1078.	29900.	0.1	0.0805	259.
12:04:03	1.285	38966.	1128.	29903.	0.2	0.0054	259.
12:04:04	1.284	37635.	1180.	29908.	0.2	-.0560	259.
12:04:05	1.283	36306.	1233.	29915.	0.3	-.0247	259.
12:04:06	1.283	34977.	1286.	29922.	0.3	0.0250	259.
12:04:07	1.284	33648.	1340.	29930.	0.3	0.0271	259.
12:04:08	1.284	32318.	1394.	29936.	0.3	-.0039	259.
12:04:09	1.284	30988.	1447.	29942.	0.2	-.0342	259.
12:04:10	1.283	29660.	1501.	29946.	0.2	-.0275	259.
12:04:11	1.282	28332.	1556.	29949.	0.1	0.0218	259.
12:04:12	1.284	27003.	1610.	29950.	0.0	0.0840	259.
12:04:13	1.287	25672.	1665.	29948.	-0.1	0.1088	259.
12:04:14	1.290	24337.	1718.	29944.	-0.2	0.0742	259.
12:04:15	1.291	23000.	1772.	29939.	-0.3	-.0020	259.
12:04:16	1.290	21664.	1825.	29932.	-0.3	-.0982	259.
12:04:17	1.286	20330.	1880.	29925.	-0.3	- .584	259.
12:04:18	1.280	19001.	1935.	29919.	-0.3	-.2039	259.
12:04:19	1.273	17679.	1993.	29913.	-0.2	-.2087	259.

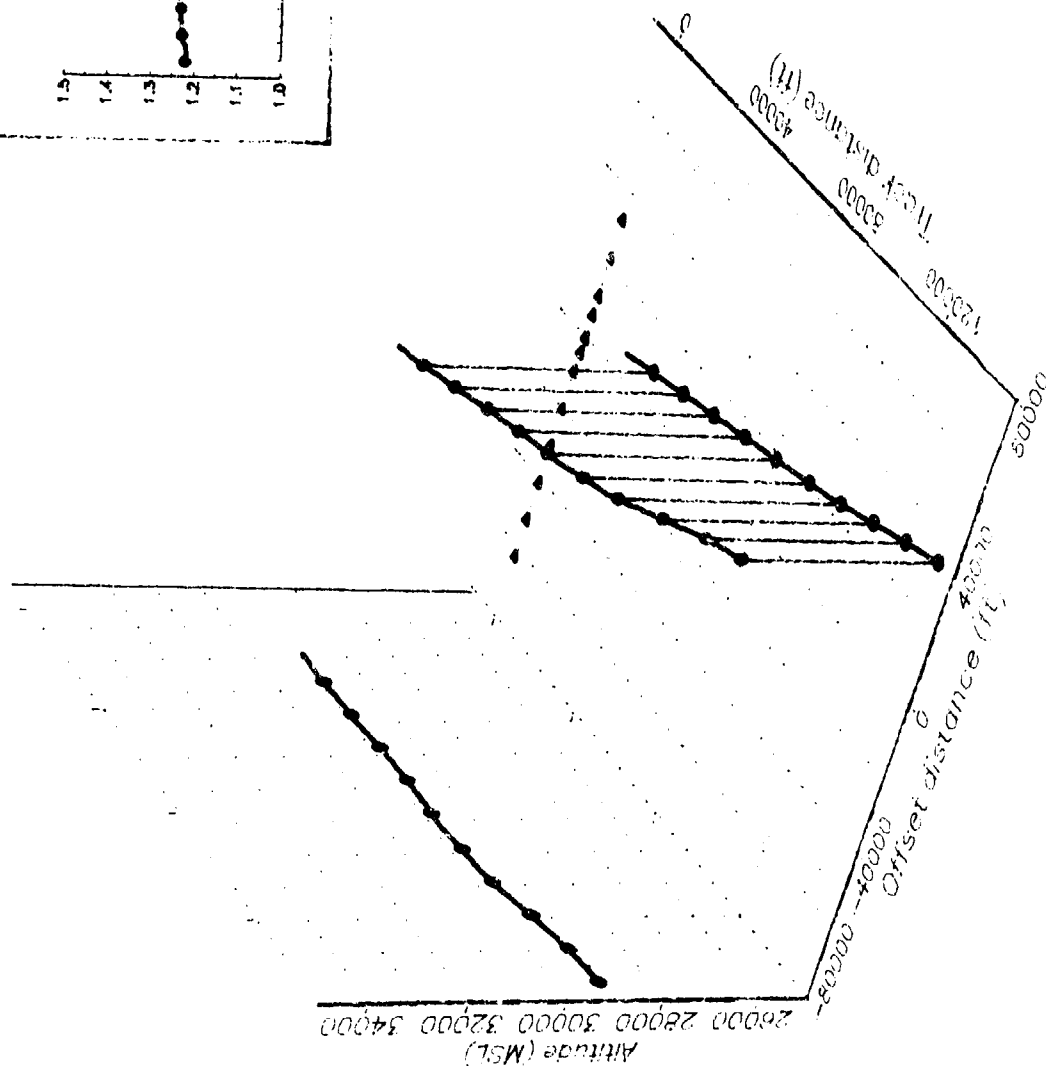
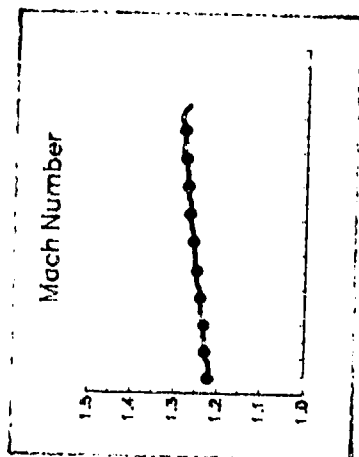


Figure B-27. F-16 on 5 Aug 87 at 1204

SR-71 AT 2.5M AT 64.8K MSL  
BOOM AT SITE 00 AT 0926 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:22:46	2.594	379261.	-9956.	64661.	0.1	-.0388	259.
9:22:47	2.592	376750.	-9858.	64662.	0.0	-.0392	259.
9:22:48	2.591	374240.	-9761.	64661.	0.0	-.0411	259.
9:22:49	2.590	371732.	-9665.	64659.	-0.1	-.0385	259.
9:22:50	2.589	369225.	-9570.	64655.	-0.1	-.0228	259.
9:22:51	2.589	366718.	-9477.	64650.	-0.1	-.0034	259.
9:22:52	2.589	364211.	-9384.	64643.	-0.2	0.0048	259.
9:22:53	2.589	361705.	-9292.	64635.	-0.2	0.0000	259.
9:22:54	2.589	359198.	-9200.	64627.	-0.2	-.0126	259.
9:22:55	2.588	356691.	-9108.	64617.	-0.2	-.0169	259.
9:22:56	2.588	354186.	-9016.	64608.	-0.2	-.0079	259.
9:22:57	2.588	351680.	-8923.	64599.	-0.2	-.0009	259.
9:22:58	2.588	349175.	-8830.	64591.	-0.2	-.0038	259.
9:22:59	2.588	346669.	-8737.	64584.	-0.2	-.0105	259.
9:23:00	2.587	344164.	-8643.	64578.	-0.1	-.0111	259.
9:23:01	2.587	341659.	-8549.	64573.	-0.1	-.0015	259.
9:23:02	2.587	339155.	-8454.	64570.	-0.1	0.0157	259.
9:23:03	2.588	336650.	-8360.	64568.	0.0	0.0414	259.
9:23:04	2.590	334143.	-8265.	64566.	0.0	0.0706	259.
9:23:05	2.593	331635.	-8171.	64565.	0.0	0.0833	259.
9:23:06	2.595	329124.	-8077.	64563.	0.0	0.0686	259.
9:23:07	2.597	326610.	-7984.	64561.	-0.1	0.0323	259.
9:23:08	2.597	324096.	-7890.	64558.	-0.1	-.0144	259.
9:23:09	2.596	321582.	-7796.	64555.	-0.1	-.0564	259.
9:23:10	2.594	319069.	-7702.	64552.	-0.1	-.0749	259.
9:23:11	2.592	316559.	-7607.	64549.	-0.1	-.0584	259.
9:23:12	2.591	314051.	-7511.	64545.	-0.1	-.0101	259.
9:23:13	2.591	311543.	-7416.	64541.	-0.1	0.0437	259.
9:23:14	2.593	309034.	-7320.	64536.	-0.1	0.0695	259.
9:23:15	2.595	306523.	-7225.	64531.	-0.1	0.0725	259.
9:23:16	2.598	304009.	-7130.	64526.	-0.1	0.0707	259.
9:23:17	2.600	301493.	-7036.	64520.	-0.1	0.0530	259.
9:23:18	2.601	298976.	-6943.	64515.	-0.1	0.0222	259.
9:23:19	2.602	296457.	-6850.	64510.	-0.1	0.0063	259.
9:23:20	2.602	293939.	-6757.	64505.	-0.1	0.0120	259.
9:23:21	2.602	291420.	-6664.	64500.	-0.1	0.0082	259.
9:23:22	2.603	288900.	-6571.	64495.	-0.1	-.0087	259.
9:23:23	2.602	286382.	-6477.	64491.	-0.1	-.0274	259.
9:23:24	2.601	283863.	-6383.	64487.	-0.1	-.0456	259.
9:23:25	2.599	281347.	-6289.	64483.	-0.1	-.0568	259.
9:23:26	2.598	278832.	-6195.	64481.	-0.1	-.0414	259.

(CONTINUED)

SR-71 AT 2.5M AT 64.8K MSL  
BOOM AT SITE 00 AT 0926 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:23:27	2.597	276318.	-6100.	64479.	0.0	-.0026	259.
9:23:28	2.597	273805.	-6006.	64478.	0.0	0.0388	259.
9:23:29	2.599	271290.	-5912.	64477.	0.0	0.0689	259.
9:23:30	2.602	268773.	-5813.	64476.	0.0	0.0712	259.
9:23:31	2.603	266254.	-5725.	64476.	0.0	0.0352	259.
9:23:32	2.604	263734.	-5631.	64475.	0.0	-.0119	259.
9:23:33	2.603	261214.	-5538.	64474.	0.0	-.0472	259.
9:23:34	2.601	258696.	-5444.	64473.	0.0	-.0507	259.
9:23:35	2.600	256179.	-5350.	64472.	0.0	-.0161	259.
9:23:36	2.600	253663.	-5255.	64471.	0.0	0.0305	259.
9:23:37	2.602	251145.	-5160.	64469.	0.0	0.0527	259.
9:23:38	2.603	248627.	-5064.	64467.	0.0	0.0455	259.
9:23:39	2.605	246106.	-4969.	64466.	0.0	0.0245	259.
9:23:40	2.605	243585.	-4873.	64465.	0.0	0.0053	259.
9:23:41	2.605	241064.	-4776.	64464.	0.0	-.0077	259.
9:23:42	2.605	238543.	-4680.	64465.	0.0	-.0118	259.
9:23:43	2.604	236022.	-4584.	64467.	0.1	-.0067	259.
9:23:44	2.604	233502.	-4487.	64470.	0.1	-.0005	259.
9:23:45	2.604	230982.	-4391.	64474.	0.1	-.0086	259.
9:23:46	2.603	228462.	-4296.	64480.	0.1	-.0280	259.
9:23:47	2.602	225943.	-4200.	64487.	0.2	-.0451	259.
9:23:48	2.600	223425.	-4106.	64495.	0.2	-.0517	259.
9:23:49	2.599	220909.	-4012.	64504.	0.2	-.0493	259.
9:23:50	2.597	218394.	-3918.	64513.	0.2	-.0388	259.
9:23:51	2.596	215881.	-3825.	64523.	0.2	-.0152	259.
9:23:52	2.596	213368.	-3732.	64532.	0.2	0.0160	259.
9:23:53	2.597	210854.	-3640.	64541.	0.2	0.0399	259.
9:23:54	2.598	208339.	-3547.	64550.	0.2	0.0478	259.
9:23:55	2.600	205823.	-3455.	64559.	0.2	0.0367	259.
9:23:56	2.601	203306.	-3362.	64567.	0.2	0.0210	259.
9:23:57	2.601	200788.	-3269.	64576.	0.2	0.0118	259.
9:23:58	2.601	198270.	-3174.	64584.	0.2	0.0102	259.
9:23:59	2.602	195751.	-3080.	64592.	0.2	-.0031	259.
9:24:00	2.601	193232.	-2985.	64600.	0.2	-.0253	259.
9:24:01	2.600	190714.	-2889.	64608.	0.2	-.0448	259.
9:24:02	2.598	188198.	-2794.	64615.	0.2	-.0485	259.
9:24:03	2.596	185683.	-2699.	64623.	0.2	-.0501	259.
9:24:04	2.595	183170.	-2604.	64630.	0.2	-.0586	259.
9:24:05	2.592	180659.	-2509.	64637.	0.1	-.0650	259.
9:24:06	2.590	178149.	-2415.	64643.	0.1	-.0589	259.
9:24:07	2.589	175642.	-2321.	64648.	0.1	-.0400	259.

(CONTINUED)

SR-71 AT 2.5M AT 64.8K MSL  
BOOM AT SITE 00 AT 0926 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:24:08	2.588	173135.	-2227.	64653.	0.1	-.0186	259.
9:24:09	2.587	170630.	-2134.	64657.	0.1	-.0083	259.
9:24:10	2.587	168124.	-2040.	64661.	0.1	-.0147	259.
9:24:11	2.586	165619.	-1946.	64664.	0.1	-.0342	259.
9:24:12	2.585	163116.	-1852.	64668.	0.1	-.0503	259.
9:24:13	2.583	160614.	-1758.	64671.	0.1	-.0524	259.
9:24:14	2.581	158113.	-1663.	64675.	0.1	-.0566	259.
9:24:15	2.579	155614.	-1568.	64679.	0.1	-.0536	259.
9:24:16	2.578	153117.	-1473.	64683.	0.1	-.0260	259.
9:24:17	2.577	150621.	-1378.	64687.	0.1	0.0138	259.
9:24:18	2.578	148124.	-1283.	64691.	0.1	0.0427	259.
9:24:19	2.580	145626.	-1190.	64695.	0.1	0.0516	259.
9:24:20	2.582	143127.	-1097.	64699.	0.1	0.0406	259.
9:24:21	2.582	140626.	-1005.	64702.	0.1	0.0143	259.
9:24:22	2.582	138124.	-913.	64704.	0.1	-.0184	259.
9:24:23	2.581	135624.	-822.	64706.	0.0	-.0444	259.
9:24:24	2.580	133124.	-731.	64707.	0.0	-.0475	259.
9:24:25	2.578	130626.	-640.	64707.	0.0	-.0225	259.
9:24:26	2.578	128129.	-549.	64707.	0.0	0.0134	259.
9:24:27	2.579	125631.	-458.	64704.	-0.1	0.0398	259.
9:24:28	2.581	123132.	-367.	64701.	-0.1	0.0461	259.
9:24:29	2.582	120632.	-276.	64696.	-0.1	0.0447	259.
9:24:30	2.584	118130.	-184.	64690.	-0.1	0.0468	259.
9:24:31	2.585	115626.	-91.	64683.	-0.2	0.0490	259.
9:24:32	2.587	113121.	2.	64675.	-0.2	0.0430	259.
9:24:33	2.588	110615.	96.	64666.	-0.2	0.0251	259.
9:24:34	2.589	108108.	190.	64657.	-0.2	0.0100	259.
9:24:35	2.589	105601.	284.	64648.	-0.2	0.0043	259.
9:24:36	2.589	103093.	378.	64639.	-0.2	-.0023	259.
9:24:37	2.589	100586.	471.	64630.	-0.2	-.0148	259.
9:24:38	2.589	98079.	564.	64623.	-0.2	-.0227	259.
9:24:39	2.588	95573.	657.	64617.	-0.1	-.0168	259.
9:24:40	2.588	93067.	749.	64612.	-0.1	-.0041	259.
9:24:41	2.588	90561.	842.	64609.	-0.1	0.0106	259.
9:24:42	2.588	88055.	935.	64608.	0.0	0.0299	259.
9:24:43	2.590	85548.	1028.	64607.	0.0	0.0454	259.
9:24:44	2.591	83040.	1122.	64607.	0.0	0.0476	259.
9:24:45	2.593	80530.	1215.	64608.	0.0	0.0353	259.
9:24:46	2.593	78019.	1307.	64609.	0.0	0.0181	259.
9:24:47	2.594	75508.	1400.	64609.	0.0	0.0114	259.
9:24:48	2.594	72996.	1493.	64610.	0.0	0.0211	259.

(CONTINUED)

SR-71 AT 2.5M AT 64.8K MSL  
BOOM AT SITE 00 AT 0926 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:25:30	2.588	-32396.	5459.	64673.	0.1	-.0238	259.
9:25:31	2.587	-34902.	5554.	64676.	0.1	-.0072	259.
9:25:32	2.587	-37408.	5649.	64678.	0.0	0.0096	259.
9:25:33	2.588	-39914.	5743.	64680.	0.0	0.0218	259.
9:25:34	2.589	-42420.	5837.	64682.	0.0	0.0237	259.
9:25:35	2.589	-44928.	5930.	64683.	0.0	0.0095	259.
9:25:36	2.589	-47436.	6024.	64686.	0.1	-.0123	259.
9:25:37	2.589	-49943.	6117.	64688.	0.1	-.0260	259.
9:25:38	2.588	-52450.	6210.	64691.	0.1	-.0288	259.
9:25:39	2.586	-54956.	6304.	64695.	0.1	-.0297	259.
9:25:40	2.586	-57460.	6398.	64699.	0.1	-.0298	259.

SR-71 AT 2.5M AT 64.8K MSL  
BOOM AT SITE 00 AT 0926 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
9:24:49	2.595	70483.	1585.	64611.	0.0	0.0307	259.
9:24:50	2.596	67969.	1678.	64612.	0.0	0.0110	259.
9:24:51	2.596	65455.	1770.	64613.	0.0	-.0348	259.
9:24:52	2.594	62943.	1863.	64615.	0.0	-.0665	259.
9:24:53	2.592	60432.	1957.	64617.	0.0	-.0574	259.
9:24:54	2.590	57923.	2051.	64619.	0.0	-.0185	259.
9:24:55	2.591	55414.	2145.	64620.	0.0	0.0291	259.
9:24:56	2.592	52905.	2240.	64622.	0.0	0.0627	259.
9:24:57	2.594	50394.	2334.	64622.	0.0	0.0605	259.
9:24:58	2.596	47881.	2427.	64623.	0.0	0.0297	259.
9:24:59	2.596	45367.	2521.	64623.	0.0	-.0143	259.
9:25:00	2.595	42853.	2615.	64623.	0.0	-.0533	259.
9:25:01	2.593	40342.	2709.	64623.	0.0	-.0634	259.
9:25:02	2.591	37832.	2804.	64624.	0.0	-.0432	259.
9:25:03	2.590	35323.	2899.	64626.	0.0	-.0173	259.
9:25:04	2.590	32815.	2994.	64627.	0.0	0.0008	259.
9:25:05	2.590	30307.	3089.	64629.	0.0	0.0137	259.
9:25:06	2.591	27799.	3185.	64630.	0.0	0.0262	259.
9:25:07	2.592	25289.	3279.	64631.	0.0	0.0352	259.
9:25:08	2.593	22779.	3374.	64632.	0.0	0.0304	259.
9:25:09	2.593	20268.	3468.	64633.	0.0	0.0093	259.
9:25:10	2.593	17756.	3562.	64633.	0.0	-.0159	259.
9:25:11	2.593	15245.	3656.	64634.	0.0	-.0334	259.
9:25:12	2.591	12735.	3750.	64635.	0.0	-.0439	259.
9:25:13	2.590	10226.	3845.	64636.	0.0	-.0464	259.
9:25:14	2.588	7719.	3939.	64637.	0.0	-.0308	259.
9:25:15	2.588	5213.	4035.	64639.	0.0	-.0071	259.
9:25:16	2.588	2707.	4130.	64640.	0.0	0.0030	259.
9:25:17	2.588	201.	4226.	64642.	0.0	-.0008	259.
9:25:18	2.588	-2305.	4322.	64644.	0.0	-.0049	259.
9:25:19	2.588	-4811.	4417.	64646.	0.0	-.0013	259.
9:25:20	2.588	-7317.	4512.	64648.	0.0	0.0075	259.
9:25:21	2.588	-9823.	4607.	64650.	0.0	0.0202	259.
9:25:22	2.589	-12330.	4702.	64652.	0.0	0.0299	259.
9:25:23	2.590	-14837.	4796.	64654.	0.0	0.0293	259.
9:25:24	2.591	-17346.	4890.	64656.	0.1	0.0155	259.
9:25:25	2.591	-19855.	4984.	64658.	0.1	-.0015	259.
9:25:26	2.591	-22364.	5078.	64661.	0.1	-.0097	259.
9:25:27	2.590	-24873.	5173.	64664.	0.1	-.0133	259.
9:25:28	2.590	-27381.	5268.	64667.	0.1	-.0208	259.
9:25:29	2.589	-29889.	5363.	64670.	0.1	-.0281	259.

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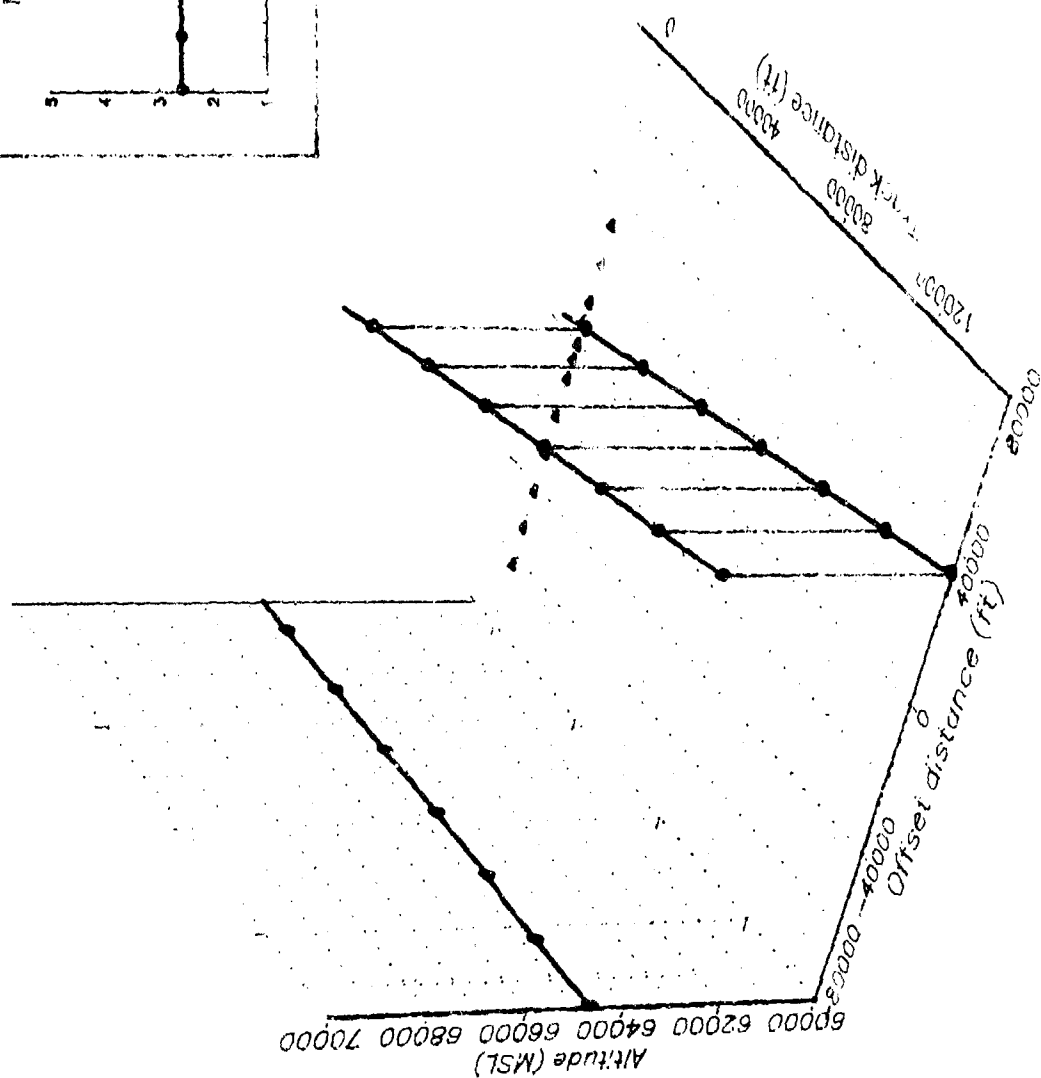
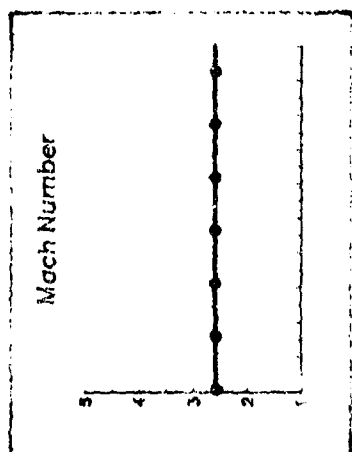


Figure B-28. SR-71 on 5 Aug 87 at 0926

SR-71 AT 1.23M AT 32.4K MSL  
BOOM AT SITE 00 AT 1108 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:06:24	1.210	154333.	939.	32206.	0.0	0.0263	256.
11:06:25	1.211	153091.	921.	32205.	-0.1	0.0259	256.
11:06:26	1.212	151848.	903.	32202.	-0.2	0.0239	256.
11:06:27	1.212	150605.	884.	32196.	-0.3	0.0205	256.
11:06:28	1.213	149360.	865.	32188.	-0.4	0.0153	256.
11:06:29	1.213	148116.	847.	32178.	-0.5	0.0108	256.
11:06:30	1.213	146871.	828.	32166.	-0.6	0.0091	256.
11:06:31	1.214	145625.	810.	32152.	-0.7	0.0095	256.
11:06:32	1.214	144380.	792.	32137.	-0.7	0.0120	256.
11:06:33	1.214	143134.	774.	32120.	-0.8	0.0186	256.
11:06:34	1.215	141887.	756.	32102.	-0.9	0.0346	256.
11:06:35	1.216	140640.	739.	32083.	-0.9	0.0635	256.
11:06:36	1.219	139390.	721.	32063.	-0.9	0.0954	256.
11:06:37	1.222	138137.	702.	32044.	-0.9	0.1051	256.
11:06:38	1.224	136881.	683.	32025.	-0.9	0.0919	256.
11:06:39	1.227	135622.	663.	32006.	-0.8	0.0734	256.
11:06:40	1.229	134361.	643.	31990.	-0.7	0.0685	256.
11:06:41	1.231	133097.	622.	31975.	-0.6	0.0528	256.
11:06:42	1.232	131832.	600.	31963.	-0.5	0.0331	256.
11:06:43	1.233	130565.	576.	31955.	-0.3	0.0228	256.
11:06:44	1.234	129298.	552.	31950.	-0.2	0.0256	255.
11:06:45	1.235	128030.	525.	31947.	-0.1	0.0326	255.
11:06:46	1.236	126762.	497.	31947.	0.0	0.0437	255.
11:06:47	1.238	125491.	467.	31949.	0.1	0.0623	255.
11:06:48	1.240	124219.	435.	31952.	0.2	0.0734	255.
11:06:49	1.242	122945.	401.	31957.	0.2	0.0622	255.
11:06:50	1.244	121669.	365.	31962.	0.3	0.0364	255.
11:06:51	1.244	120391.	327.	31968.	0.3	0.0084	255.
11:06:52	1.244	119114.	287.	31974.	0.3	-0.0004	255.
11:06:53	1.245	117837.	244.	31981.	0.3	0.0239	255.
11:06:54	1.246	116558.	199.	31988.	0.3	0.0613	254.
11:06:55	1.248	115278.	150.	31994.	0.3	0.0757	254.
11:06:56	1.250	113997.	98.	32000.	0.3	0.0533	254.
11:06:57	1.252	112713.	43.	32005.	0.2	0.0106	254.
11:06:58	1.251	111429.	-14.	32011.	0.2	-0.0189	254.
11:06:59	1.251	110146.	-75.	32016.	0.2	-0.0149	254.
11:07:00	1.251	108863.	-138.	32021.	0.2	0.0128	254.
11:07:01	1.252	107581.	-204.	32027.	0.2	0.0436	253.
11:07:02	1.253	106297.	-275.	32032.	0.2	0.0662	253.
11:07:03	1.256	105011.	-349.	32037.	0.2	0.0783	253.
11:07:04	1.258	103723.	-427.	32043.	0.2	0.0729	253.

(CONTINUED)

SR-71 AT 1.23M AT 32.4K MSL  
BOOM AT SITE 00 AT 1108 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:07:05	1.260	102433.	-510.	32048.	0.2	0.0415	253.
11:07:06	1.261	101143.	-597.	32053.	0.2	-.0037	253.
11:07:07	1.260	99852.	-687.	32058.	0.2	-.0515	252.
11:07:08	1.258	98564.	-782.	32064.	0.2	-.0913	252.
11:07:09	1.255	97278.	-879.	32069.	0.2	-.1055	252.
11:07:10	1.252	95997.	-979.	32075.	0.2	-.0846	252.
11:07:11	1.250	94718.	-1082.	32080.	0.2	-.0388	252.
11:07:12	1.249	93440.	-1188.	32085.	0.2	0.0155	252.
11:07:13	1.250	92163.	-1295.	32090.	0.2	0.0597	252.
11:07:14	1.253	90884.	-1405.	32095.	0.2	0.0816	251.
11:07:15	1.255	89602.	-1515.	32099.	0.2	0.0793	251.
11:07:16	1.258	88318.	-1627.	32102.	0.2	0.0590	251.
11:07:17	1.259	87032.	-1737.	32105.	0.1	0.0349	251.
11:07:18	1.260	85744.	-1848.	32108.	0.1	0.0196	252.
11:07:19	1.260	84456.	-1957.	32111.	0.1	0.0124	252.
11:07:20	1.261	83168.	-2066.	32115.	0.1	0.0040	252.
11:07:21	1.261	81879.	-2174.	32118.	0.2	-.0113	252.
11:07:22	1.260	80591.	-2281.	32122.	0.2	-.0328	252.
11:07:23	1.259	79303.	-2388.	32126.	0.2	-.0481	252.
11:07:24	1.257	78017.	-2493.	32131.	0.2	-.0411	252.
11:07:25	1.257	76732.	-2597.	32136.	0.2	-.0066	252.
11:07:26	1.257	75447.	-2699.	32141.	0.2	0.0393	252.
11:07:27	1.259	74161.	-2800.	32146.	0.2	0.0644	252.
11:07:28	1.261	72873.	-2899.	32151.	0.2	0.0571	252.
11:07:29	1.262	71582.	-2997.	32155.	0.2	0.0235	252.
11:07:30	1.262	70291.	-3092.	32158.	0.1	-.0290	252.
11:07:31	1.261	69001.	-3184.	32161.	0.1	-.0727	252.
11:07:32	1.258	67712.	-3273.	32163.	0.1	-.0803	253.
11:07:33	1.256	66425.	-3358.	32166.	0.1	-.0441	253.
11:07:34	1.255	65140.	-3440.	32170.	0.2	0.0103	253.
11:07:35	1.257	63854.	-3519.	32173.	0.2	0.0508	253.
11:07:36	1.258	62566.	-3595.	32177.	0.2	0.0669	253.
11:07:37	1.260	61277.	-3667.	32181.	0.2	0.0609	253.
11:07:38	1.262	59985.	-3738.	32185.	0.2	0.0340	253.
11:07:39	1.263	58691.	-3805.	32189.	0.2	-.0061	254.
11:07:40	1.262	57398.	-3870.	32192.	0.1	-.0455	254.
11:07:41	1.260	56106.	-3932.	32195.	0.1	-.0731	254.
11:07:42	1.258	54816.	-3991.	32198.	0.1	-.0788	254.
11:07:43	1.255	53528.	-4047.	32200.	0.1	-.0615	254.
11:07:44	1.254	52242.	-4100.	32202.	0.1	-.0260	254.
11:07:45	1.254	50957.	-4150.	32204.	0.1	0.0139	254.

(CONTINUED)

SR-71 AT 1.23M AT 32.4K MSL  
BOOM AT SITE 00 AT 1108 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:07:46	1.255	49671.	-4196.	32205.	0.1	0.0335	255.
11:07:47	1.256	48385.	-4238.	32207.	0.0	0.0309	255.
11:07:48	1.257	47096.	-4276.	32207.	0.0	0.0247	255.
11:07:49	1.257	45807.	-4309.	32208.	0.0	0.0188	255.
11:07:50	1.258	44518.	-4337.	32208.	0.0	0.0096	256.
11:07:51	1.258	43227.	-4358.	32208.	0.0	-0.0005	256.
11:07:52	1.258	41937.	-4372.	32208.	0.0	0.0014	256.
11:07:53	1.258	40646.	-4380.	32209.	0.0	0.0210	256.
11:07:54	1.259	39355.	-4381.	32210.	0.0	0.0452	257.
11:07:55	1.261	38062.	-4376.	32211.	0.0	0.0537	257.
11:07:56	1.262	36767.	-4364.	32212.	0.0	0.0410	257.
11:07:57	1.263	35472.	-4347.	32212.	0.0	0.0122	258.
11:07:58	1.263	34175.	-4324.	32213.	0.0	-0.0263	258.
11:07:59	1.262	32880.	-4295.	32214.	0.0	-0.0636	258.
11:08:00	1.259	31587.	-4260.	32215.	0.0	-0.0908	258.
11:08:01	1.256	30297.	-4220.	32216.	0.1	-0.0857	259.
11:08:02	1.254	29010.	-4174.	32217.	0.1	-0.0453	259.
11:08:03	1.253	27724.	-4125.	32219.	0.1	0.0080	259.
11:08:04	1.255	26438.	-4072.	32220.	0.1	0.0523	259.
11:08:05	1.257	25151.	-4018.	32222.	0.1	0.0740	259.
11:08:06	1.259	23861.	-3962.	32224.	0.1	0.0739	259.
11:08:07	1.261	22570.	-3905.	32226.	0.1	0.0601	259.
11:08:08	1.263	21276.	-3848.	32228.	0.1	0.0304	259.
11:08:09	1.263	19981.	-3791.	32230.	0.1	-0.0119	259.
11:08:10	1.262	18687.	-3734.	32233.	0.1	-0.0573	259.
11:08:11	1.260	17394.	-3678.	32237.	0.2	-0.0816	259.
11:08:12	1.257	16104.	-3622.	32241.	0.2	-0.0640	259.
11:08:13	1.256	14816.	-3566.	32246.	0.2	-0.0097	259.
11:08:14	1.257	13528.	-3511.	32250.	0.2	0.0526	259.
11:08:15	1.259	12239.	-3457.	32254.	0.2	0.0754	259.
11:08:16	1.261	10947.	-3404.	32258.	0.2	0.0487	259.
11:08:17	1.262	9654.	-3352.	32262.	0.1	-0.0091	259.
11:08:18	1.260	8360.	-3300.	32265.	0.1	-0.0697	259.
11:08:19	1.258	7070.	-3248.	32267.	0.1	-0.1083	259.
11:08:20	1.254	5782.	-3196.	32268.	0.0	-0.1097	259.
11:08:21	1.251	4498.	-3143.	32269.	0.0	-0.0672	259.
11:08:22	1.250	3216.	-3091.	32267.	-0.1	0.0068	259.
11:08:23	1.252	1934.	-3038.	32264.	-0.2	0.0775	259.
11:08:24	1.255	649.	-2986.	32259.	-0.3	0.1160	259.
11:08:25	1.258	-639.	-2934.	32252.	-0.3	0.1144	259.
11:08:26	1.261	-1931.	-2883.	32244.	-0.4	0.0921	259.

(CONTINUED)

SR-71 AT 1.23M AT 32.4K MSL  
BOOM AT SITE 00 AT 1108 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
11:08:27	1.264	-3226.	-2832.	32234.	-0.5	0.0718 259.
11:08:28	1.266	-4523.	-2782.	32223.	-0.5	0.0514 259.
11:08:29	1.267	-5821.	-2731.	32212.	-0.5	0.0141 259.
11:08:30	1.265	-7121.	-2680.	32199.	-0.6	-.0329 259.
11:08:31	1.265	-8419.	-2629.	32186.	-0.6	-.0666 259.
11:08:32	1.262	-9715.	-2578.	32173.	-0.6	-.0795 259.
11:08:33	1.260	-11008.	-2526.	32159.	-0.6	-.0805 259.

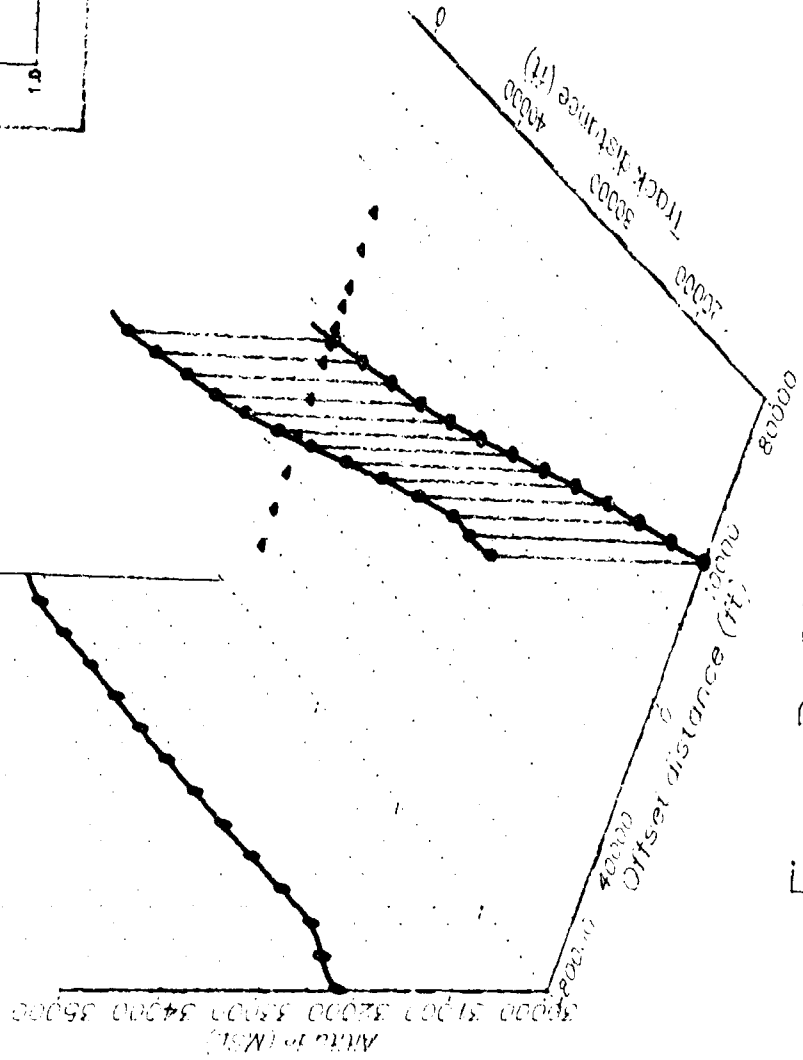
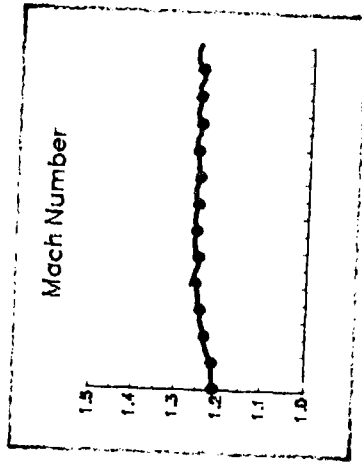


Figure B-29. SR-71 on 5 Aug 87 at 1108

SR-71 AT 1.7M AT 52K MSL

BOOM AT SITE 00 AT 1335 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:33:40	1.742	152711.	26616.	52144.	0.6	0.0332	254.
12:33:41	1.743	151076.	26525.	52160.	0.5	0.0357	253.
12:33:42	1.744	149441.	26424.	52173.	0.4	0.0387	253.
12:33:43	1.745	147806.	26313.	52185.	0.4	0.0446	252.
12:33:44	1.747	146169.	26191.	52195.	0.3	0.0566	252.
12:33:45	1.749	144533.	26059.	52202.	0.2	0.0675	252.
12:33:46	1.752	142894.	25916.	52208.	0.2	0.0667	251.
12:33:47	1.754	141255.	25761.	52211.	0.1	0.0572	251.
12:33:48	1.755	139616.	25597.	52213.	0.0	0.0471	250.
12:33:49	1.757	137976.	25422.	52213.	0.0	0.0398	250.
12:33:50	1.758	136336.	25237.	52212.	0.0	0.0378	250.
12:33:51	1.760	134696.	25045.	52210.	-0.1	0.0438	249.
12:33:52	1.761	133055.	24845.	52208.	-0.1	0.0579	249.
12:33:53	1.764	131413.	24640.	52205.	-0.1	0.0755	249.
12:33:54	1.766	129769.	24431.	52201.	-0.1	0.0881	249.
12:33:55	1.770	128123.	24220.	52197.	-0.2	0.0868	249.
12:33:56	1.772	126475.	24006.	52192.	-0.2	0.0691	249.
12:33:57	1.774	124824.	23793.	52186.	-0.2	0.0401	249.
12:33:58	1.775	123172.	23579.	52180.	-0.2	0.0168	249.
12:33:59	1.776	121519.	23367.	52174.	-0.2	0.0024	249.
12:34:00	1.776	119866.	23156.	52168.	-0.2	0.0014	249.
12:34:01	1.776	118213.	22945.	52163.	-0.2	0.0154	249.
12:34:02	1.777	116559.	22736.	52157.	-0.2	0.0303	249.
12:34:03	1.778	114904.	22527.	52150.	-0.2	0.0373	249.
12:34:04	1.779	113248.	22318.	52143.	-0.3	0.0450	249.
12:34:05	1.781	111590.	22109.	52135.	-0.3	0.0538	249.
12:34:06	1.783	109931.	21901.	52126.	-0.4	0.0603	249.
12:34:07	1.785	108269.	21693.	52115.	-0.4	0.0608	249.
12:34:08	1.787	106606.	21485.	52101.	-0.5	0.0624	249.
12:34:09	1.790	104940.	21278.	52086.	-0.6	0.0712	249.
12:34:10	1.792	103272.	21072.	52067.	-0.7	0.0839	249.
12:34:11	1.796	101602.	20866.	52047.	-0.7	0.0925	249.
12:34:12	1.799	99928.	20660.	52025.	-0.8	0.0915	249.
12:34:13	1.802	98251.	20456.	52002.	-0.8	0.0741	249.
12:34:14	1.804	96572.	20251.	51980.	-0.7	0.0441	249.
12:34:15	1.805	94892.	20049.	51961.	-0.6	0.0129	249.
12:34:16	1.805	93210.	19847.	51946.	-0.4	-0.0104	250.
12:34:17	1.804	91529.	19648.	51935.	-0.3	-0.0208	250.
12:34:18	1.804	89848.	19451.	51929.	-0.1	-0.0229	250.
12:34:19	1.803	88167.	19255.	51928.	0.0	-0.0339	250.
12:34:20	1.801	86487.	19062.	51930.	0.1	-0.0635	250.

(CONTINUED)

SR-71 AT 1.7M AT 52K MSL  
BOOM AT SITE 00 AT 1235 ON 05 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:34:21	1.798	84809.	18870.	51934.	0.2	-.0982	250.
12:34:22	1.795	83134.	18680.	51940.	0.2	-.1119	250.
12:34:23	1.791	81462.	18493.	51945.	0.2	-.0954	250.
12:34:24	1.788	79793.	18307.	51950.	0.1	-.0704	250.
12:34:25	1.786	78127.	18122.	51952.	0.1	-.0545	250.
12:34:26	1.785	76461.	17939.	51953.	0.0	-.0361	250.
12:34:27	1.783	74797.	17757.	51952.	-0.1	-.0193	250.
12:34:28	1.783	73133.	17577.	51949.	-0.1	-.0124	250.
12:34:29	1.783	71470.	17397.	51944.	-0.2	-.0211	250.
12:34:30	1.781	69807.	17218.	51937.	-0.3	-.0478	250.
12:34:31	1.779	68145.	17041.	51929.	-0.3	-.0820	250.
12:34:32	1.776	66486.	16865.	51920.	-0.3	-.1090	250.
12:34:33	1.772	64830.	16690.	51910.	-0.3	-.1172	250.
12:34:34	1.768	63178.	16517.	51900.	-0.4	-.1061	250.
12:34:35	1.765	61529.	16344.	51890.	-0.4	-.0822	250.
12:34:36	1.763	59883.	16170.	51880.	-0.4	-.0530	250.
12:34:37	1.761	58239.	15997.	51870.	-0.4	-.0313	250.
12:34:38	1.760	56596.	15823.	51859.	-0.3	-.0245	250.
12:34:39	1.759	54953.	15648.	51850.	-0.3	-.0240	250.
12:34:40	1.758	53312.	15473.	51841.	-0.3	-.0287	250.
12:34:41	1.757	51671.	15299.	51833.	-0.2	-.0442	250.
12:34:42	1.755	50032.	15124.	51827.	-0.2	-.0716	250.
12:34:43	1.752	48394.	14951.	51823.	-0.1	-.1037	250.
12:34:44	1.748	46761.	14779.	51822.	0.0	-.1232	250.
12:34:45	1.744	45130.	14607.	51824.	0.1	-.1200	250.
12:34:46	1.740	43504.	14437.	51828.	0.2	-.1103	250.
12:34:47	1.737	41881.	14267.	51834.	0.2	-.1101	250.
12:34:48	1.733	40262.	14098.	51842.	0.3	-.1133	250.
12:34:49	1.729	38646.	13931.	51851.	0.3	-.1095	250.
12:34:50	1.725	37033.	13764.	51861.	0.4	-.0993	250.
12:34:51	1.722	35424.	13597.	51871.	0.4	-.0831	250.
12:34:52	1.720	33817.	13431.	51882.	0.4	-.0675	250.
12:34:53	1.717	32212.	13265.	51893.	0.4	-.0698	250.
12:34:54	1.715	30610.	13098.	51904.	0.4	-.0837	250.
12:34:55	1.712	29011.	12932.	51915.	0.4	-.0894	250.
12:34:56	1.709	27414.	12767.	51926.	0.4	-.0752	250.
12:34:57	1.707	25819.	12602.	51936.	0.4	-.0489	250.
12:34:58	1.705	24226.	12437.	51945.	0.3	-.0261	250.
12:34:59	1.705	22634.	12273.	51954.	0.3	-.0121	250.
12:35:00	1.704	21042.	12109.	51961.	0.2	-.0117	250.
12:35:01	1.704	19451.	11945.	51967.	0.2	-.0272	250.

(CONTINUED)



SR-71 AT 1.7M AT 52K MSL

(CONTINUED)

BOOM AT SITE 00 AT 1235 ON 05 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
12:35:02	1.702	17861.	11781.	51972.	0.1	-.0592 250.
12:35:03	1.700	16272.	11617.	51974.	0.1	-.0987 250.
12:35:04	1.696	14687.	11453.	51975.	0.0	-.1291 250.
12:35:05	1.691	13105.	11290.	51974.	0.0	-.1433 250.
12:35:06	1.686	11528.	11128.	51972.	-0.1	-.1371 250.
12:35:07	1.682	9955.	10966.	51969.	-0.1	-.0965 250.
12:35:08	1.680	8386.	10804.	51965.	-0.2	-.0260 250.
12:35:09	1.680	6817.	10643.	51960.	-.2	0.0479 250.
12:35:10	1.683	5247.	10481.	51954.	-0.2	0.1028 250.
12:35:11	1.687	3674.	10319.	51947.	-0.3	0.1257 250.
12:35:12	1.691	2096.	10157.	51939.	-0.3	0.1219 250.
12:35:13	1.695	515.	9995.	51930.	-0.3	0.1141 251.
12:35:14	1.699	-1070.	9833.	51921.	-0.4	0.1130 251.

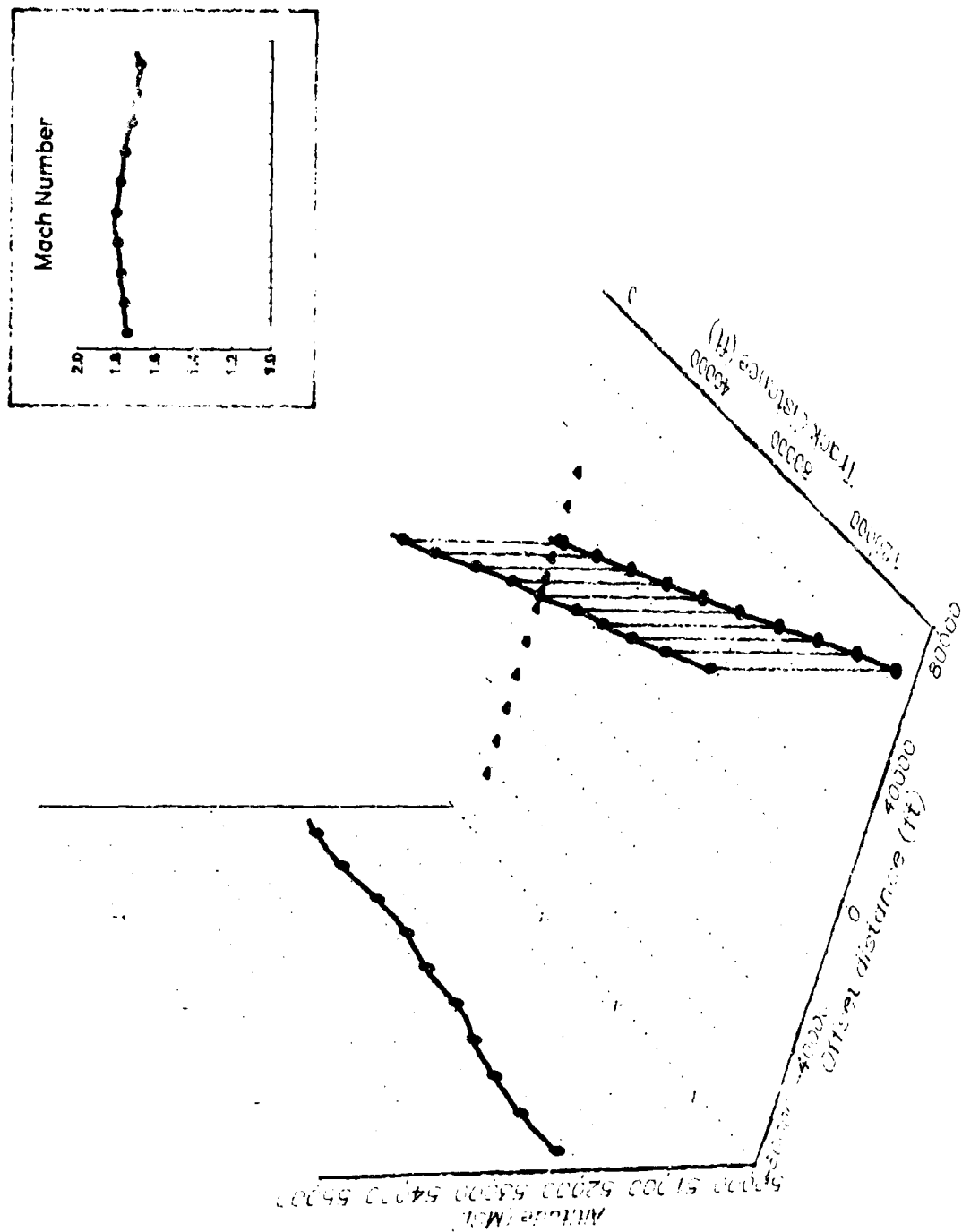


Figure B--30. SR-71 on 5 Aug 87 at 1235

F-18 AT 1.3M AT 30K MSL

BOOM AT SITE 00 AT 0744 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:42:10	1.275	138838.	-24243.	30384.	-3.3	-.0133	282.
7:42:11	1.274	137053.	-23701.	30318.	-2.4	-.0065	282.
7:42:12	1.274	136467.	-23159.	30273.	-1.5	0.0010	282.
7:42:13	1.274	135281.	-22617.	30247.	-0.7	0.0098	282.
7:42:14	1.274	134094.	-22075.	30239.	0.0	0.0021	282.
7:42:15	1.274	132908.	-21532.	30245.	0.5	-.0085	282.
7:42:16	1.274	131723.	-20988.	30260.	0.8	-.0090	283.
7:42:17	1.274	130538.	-20443.	30280.	0.9	0.0043	283.
7:42:18	1.274	129355.	-19897.	30300.	0.9	0.0167	283.
7:42:19	1.275	128171.	-19349.	30319.	0.7	0.0495	283.
7:42:20	1.278	126986.	-18800.	30334.	0.5	0.0824	283.
7:42:21	1.280	125799.	-18250.	30343.	0.3	0.0662	283.
7:42:22	1.281	124610.	-17700.	30348.	0.1	0.0151	283.
7:42:23	1.281	123420.	-17149.	30349.	0.0	-.0095	283.
7:42:24	1.281	122230.	-16599.	30347.	-0.1	-.0045	283.
7:42:25	1.281	121040.	-16048.	30345.	-0.1	0.0150	283.
7:42:26	1.282	119850.	-15498.	30344.	-0.1	0.0487	283.
7:42:27	1.284	118657.	-14949.	30343.	0.0	0.0696	283.
7:42:28	1.286	117462.	-14401.	30343.	0.0	0.0546	282.
7:42:29	1.288	116264.	-13853.	30345.	0.1	0.0308	282.
7:42:30	1.288	115066.	-13304.	30349.	0.2	0.0296	282.
7:42:31	1.289	113867.	-12755.	30354.	0.3	0.0380	283.
7:42:32	1.291	112668.	-12204.	30360.	0.3	0.0378	283.
7:42:33	1.292	111467.	-11652.	30368.	0.3	0.0284	283.
7:42:34	1.293	110266.	-11100.	30375.	0.3	0.0365	283.
7:42:35	1.294	109063.	-10549.	30383.	0.3	0.0659	282.
7:42:36	1.297	107858.	-9997.	30389.	0.2	0.0810	282.
7:42:37	1.299	106649.	-9447.	30394.	0.2	0.0594	282.
7:42:38	1.300	105438.	-8898.	30397.	0.1	0.0082	282.
7:42:39	1.300	104226.	-8348.	30399.	0.1	-.0443	282.
7:42:40	1.298	103017.	-7798.	30400.	0.0	-.0629	282.
7:42:41	1.296	101810.	-7247.	30399.	-0.1	-.0415	282.
7:42:42	1.296	100604.	-6696.	30397.	-0.1	0.0176	282.
7:42:43	1.297	99398.	-6144.	30392.	-0.2	0.0694	282.
7:42:44	1.299	98190.	-5593.	30387.	-0.3	0.0778	282.
7:42:45	1.302	96978.	-5043.	30381.	-0.3	0.0566	282.
7:42:46	1.303	95762.	-4496.	30374.	-0.3	0.0442	282.
7:42:47	1.304	94543.	-3954.	30369.	-0.2	0.0457	282.
7:42:48	1.306	93319.	-3419.	30363.	-0.2	0.0338	281.
7:42:49	1.306	92088.	-2894.	30357.	-0.3	0.0071	281.
7:42:50	1.306	90852.	-2382.	30351.	-0.3	-.0012	280.

(CONTINUED)

F-18 AT 1.3M AT 30K MSL  
BOOM AT SITE 00 AT 0744 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:42:51	1.306	89610.	-1883.	30343.	-0.4	0.0183	279.
7:42:52	1.307	88360.	-1399.	30334.	-0.4	0.0204	279.
7:42:53	1.307	87103.	-931.	30324.	-0.4	0.0056	278.
7:42:54	1.307	85840.	-478.	30313.	-0.4	0.0142	277.
7:42:55	1.308	84570.	-41.	30304.	-0.4	0.0263	276.
7:42:56	1.309	83294.	381.	30296.	-0.3	0.0280	276.
7:42:57	1.309	82012.	788.	30289.	-0.3	0.0198	275.
7:42:58	1.310	80723.	1179.	30283.	-0.2	0.0243	274.
7:42:59	1.311	79429.	1555.	30277.	-0.2	0.0266	273.
7:43:00	1.311	78129.	1915.	30272.	-0.3	0.0213	273.
7:43:01	1.312	76824.	2260.	30265.	-0.3	0.0327	272.
7:43:02	1.313	75514.	2589.	30257.	-0.3	0.0578	271.
7:43:03	1.315	74197.	2903.	30248.	-0.4	0.0421	270.
7:43:04	1.315	72875.	3200.	30239.	-0.4	-0.0150	270.
7:43:05	1.314	71550.	3483.	30228.	-0.5	-0.0372	269.
7:43:06	1.314	70222.	3750.	30217.	-0.5	0.0085	268.
7:43:07	1.315	68891.	4002.	30205.	-0.5	0.0689	268.
7:43:08	1.317	67555.	4239.	30192.	-0.5	0.0859	267.
7:43:09	1.319	66214.	4459.	30179.	-0.5	0.0573	266.
7:43:10	1.320	64867.	4663.	30166.	-0.5	0.0337	265.
7:43:11	1.321	63517.	4849.	30155.	-0.5	0.0214	265.
7:43:12	1.321	62163.	5017.	30144.	-0.5	-0.0129	264.
7:43:13	1.320	60808.	5165.	30133.	-0.5	-0.0486	263.
7:43:14	1.318	59451.	5294.	30121.	-0.5	-0.0496	262.
7:43:15	1.317	58095.	5401.	30108.	-0.6	-0.0119	261.
7:43:16	1.317	56737.	5487.	30093.	-0.7	0.0333	260.
7:43:17	1.319	55377.	5551.	30077.	-0.7	0.0584	259.
7:43:18	1.320	54014.	5593.	30060.	-0.8	0.0522	258.
7:43:19	1.321	52650.	5612.	30042.	-0.7	0.0302	257.
7:43:20	1.322	51284.	5608.	30024.	-0.7	0.0198	256.
7:43:21	1.322	49918.	5581.	30008.	-0.6	0.0274	255.
7:43:22	1.323	48552.	5531.	29994.	-0.6	0.0174	254.
7:43:23	1.323	47187.	5459.	29981.	-0.5	-0.0118	253.
7:43:24	1.322	45824.	5368.	29971.	-0.4	-0.0134	252.
7:43:25	1.322	44462.	5261.	29961.	-0.4	-0.0295	252.
7:43:26	1.320	43102.	5142.	29952.	-0.4	-0.1068	251.
7:43:27	1.315	41747.	5017.	29944.	-0.3	-0.1511	251.
7:43:28	1.311	40396.	4889.	29937.	-0.3	-0.0667	251.
7:43:29	1.311	39048.	4760.	29932.	-0.2	0.0606	251.
7:43:30	1.314	37698.	4631.	29926.	-0.2	0.1309	251.
7:43:31	1.318	36344.	4500.	29922.	-0.2	0.0999	251.

(CONTINUED)

F-18 AT 1.3M AT 30K MSL  
BOOM AT SITE 00 AT 0744 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:43:32	1.320	34987.	4369.	29917.	-0.2	-.0050	251.
7:43:33	1.318	33630.	4237.	29913.	-0.1	-.0689	251.
7:43:34	1.316	32275.	4105.	29910.	-0.1	-.0515	251.
7:43:35	1.315	30922.	3971.	29908.	-0.1	-.0107	251.
7:43:36	1.315	29570.	3835.	29907.	0.0	-.0304	251.
7:43:37	1.313	28219.	3696.	29906.	0.0	-.0788	250.
7:43:38	1.311	26870.	3557.	29906.	0.0	-.0737	250.
7:43:39	1.309	25524.	3417.	29907.	0.0	-.0348	250.
7:43:40	1.308	24179.	3276.	29908.	0.1	0.0011	250.
7:43:41	1.309	22834.	3135.	29910.	0.1	0.0295	250.
7:43:42	1.310	21489.	2993.	29913.	0.1	0.0312	250.
7:43:43	1.311	20142.	2851.	29915.	0.1	0.0220	250.
7:43:44	1.311	18795.	2707.	29917.	0.1	0.0269	250.
7:43:45	1.312	17448.	2561.	29918.	0.0	-.0061	250.
7:43:46	1.310	16101.	2414.	29916.	-0.1	-.1200	250.
7:43:47	1.304	14758.	2264.	29912.	-0.2	-.2593	250.
7:43:48	1.295	13423.	2115.	29906.	-0.2	-.3608	250.
7:43:49	1.283	12100.	1966.	29902.	-0.1	-.3624	250.
7:43:50	1.273	10787.	1819.	29902.	0.1	-.2999	250.
7:43:51	1.265	9485.	1672.	29909.	0.6	-.2523	250.
7:43:52	1.257	8191.	1525.	29929.	1.2	-.2484	250.
7:43:53	1.250	6905.	1378.	29965.	2.0	-.2803	250.
7:43:54	1.241	5629.	1232.	30021.	3.0	-.3203	250.
7:43:55	1.231	4364.	1088.	30099.	4.1	-.3615	250.
7:43:56	1.220	3113.	945.	30201.	5.2	-.4141	250.
7:43:57	1.208	1877.	805.	30328.	6.4	-.4549	250.
7:43:58	1.195	657.	667.	30480.	7.6	-.4542	250.
7:43:59	1.183	-544.	531.	30657.	8.9	-.4315	250.
7:44:00	1.172	-1727.	396.	30858.	10.2	-.4116	250.

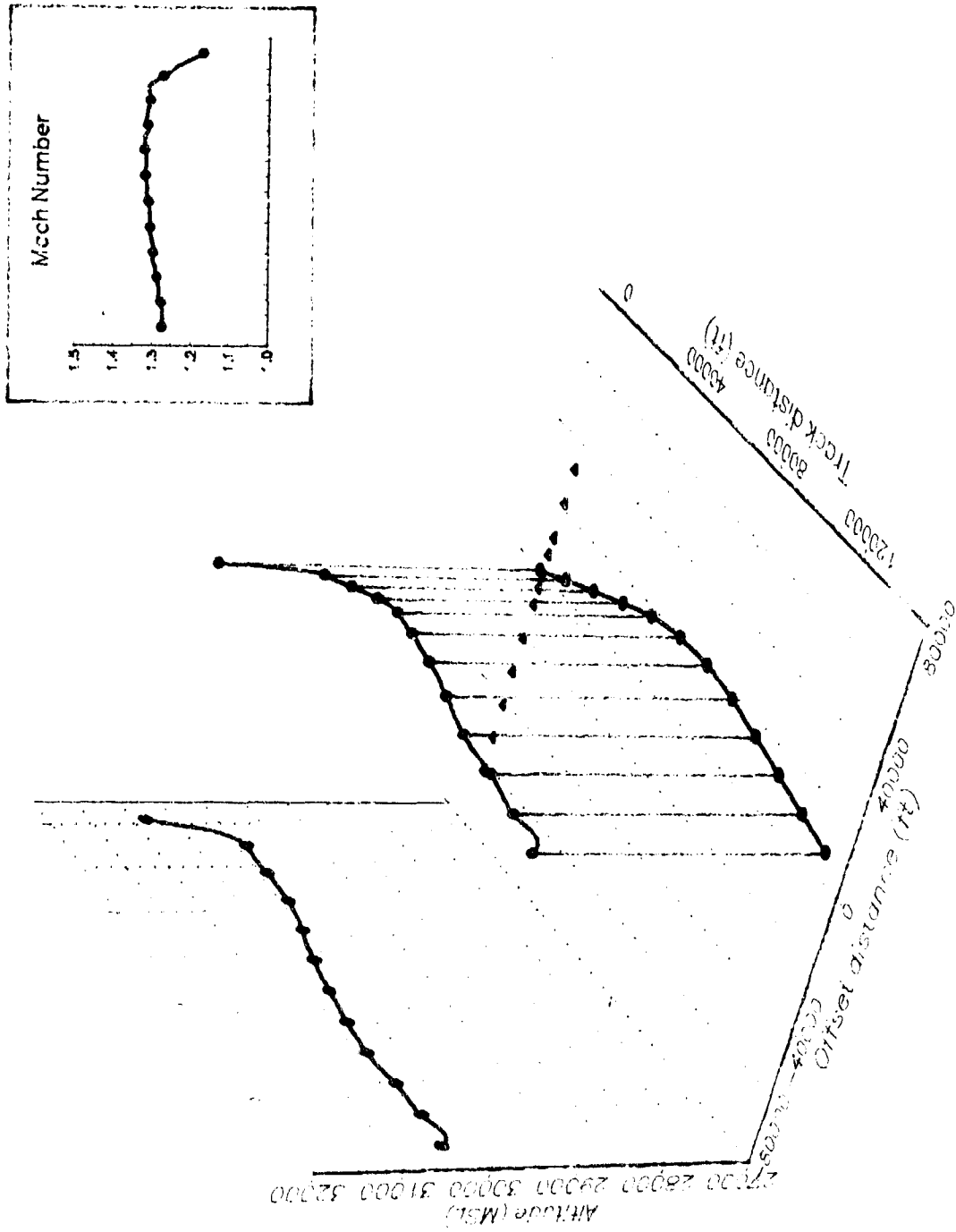


Figure B-31. F-18 on 6 Aug 87 at 0744

F-18 AT 1.4M AT 44.7K MSL  
BOOM AT SITE 00 AT 0757 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:54:50	1.351	143831.	-26660.	45571.	-0.2	-.0281	274.
7:54:51	1.350	142616.	-26294.	45565.	-0.3	-.0257	274.
7:54:52	1.349	141402.	-25926.	45558.	-0.3	0.0002	274.
7:54:53	1.350	140189.	-25556.	45549.	-0.4	0.0874	274.
7:54:54	1.355	138973.	-25185.	45538.	-0.6	0.1731	274.
7:54:55	1.361	137752.	-24813.	45523.	-0.7	0.1769	274.
7:54:56	1.366	136525.	-24441.	45507.	-0.8	0.1265	274.
7:54:57	1.370	135295.	-24067.	45489.	-0.7	0.0826	274.
7:54:58	1.372	134062.	-23691.	45473.	-0.7	0.0656	275.
7:54:59	1.374	132827.	-23313.	45458.	-0.6	0.0543	275.
7:55:00	1.375	131592.	-22934.	45446.	-0.5	0.0184	275.
7:55:01	1.376	130356.	-22552.	45435.	-0.4	0.0228	275.
7:55:02	1.378	129121.	-22168.	45426.	-0.4	0.1069	275.
7:55:03	1.383	127882.	-21781.	45417.	-0.4	0.1908	275.
7:55:04	1.390	126637.	-21394.	45409.	-0.4	0.2111	275.
7:55:05	1.396	125386.	-21006.	45400.	-0.4	0.1428	275.
7:55:06	1.399	124131.	-20618.	45392.	-0.3	0.0579	275.
7:55:07	1.401	122873.	-20230.	45384.	-0.3	0.0160	275.
7:55:08	1.401	121614.	-19842.	45378.	-0.3	0.0081	275.
7:55:09	1.401	120355.	-19454.	45371.	-0.3	0.0028	275.
7:55:10	1.401	119096.	-19065.	45364.	-0.3	-.0030	275.
7:55:11	1.401	117838.	-18676.	45356.	-0.4	0.0054	275.
7:55:12	1.402	116579.	-18287.	45347.	-0.4	0.0462	275.
7:55:13	1.404	115318.	-17897.	45335.	-0.6	0.0974	275.
7:55:14	1.408	114055.	-17508.	45320.	-0.7	0.0963	275.
7:55:15	1.410	112789.	-17117.	45302.	-0.8	0.0214	275.
7:55:16	1.409	111523.	-16726.	45282.	-0.9	-.0585	275.
7:55:17	1.407	110258.	-16334.	45262.	-0.8	-.0657	275.
7:55:18	1.406	108996.	-15940.	45243.	-0.8	-.0045	275.
7:55:19	1.407	107735.	-15545.	45226.	-0.7	0.0783	275.
7:55:20	1.410	106471.	-15150.	45210.	-0.7	0.0993	275.
7:55:21	1.413	105204.	-14755.	45194.	-0.7	0.0584	275.
7:55:22	1.414	103934.	-14362.	45178.	-0.6	-.0005	275.
7:55:23	1.413	102664.	-13972.	45164.	-0.6	-.0304	275.
7:55:24	1.413	101393.	-13586.	45150.	-0.6	-.0211	274.
7:55:25	1.412	100120.	-13205.	45136.	-0.6	-.0060	274.
7:55:26	1.412	98846.	-12832.	45124.	-0.5	-.0049	274.
7:55:27	1.412	97569.	-12468.	45111.	-0.5	0.0009	273.
7:55:28	1.413	96289.	-12114.	45099.	-0.5	0.0223	273.
7:55:29	1.414	95005.	-11769.	45087.	-0.5	0.0510	272.
7:55:30	1.416	93716.	-11435.	45076.	-0.5	0.0616	272.

(CONTINUED)

F-18 AT 1.4M AT 44.7K MSL  
BOOM AT SITE 00 AT 0757 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
7:55:31	1.418	92423.	-11112.	45064.	-0.5	0.0261 271.
7:55:32	1.418	91126.	-10799.	45052.	-0.5	-.0269 271.
7:55:33	1.417	89827.	-10498.	45039.	-0.6	-.0475 270.
7:55:34	1.416	88526.	-10208.	45026.	-0.6	-.0335 270.
7:55:35	1.415	87224.	-9929.	45012.	-0.6	-.0089 269.
7:55:36	1.415	85920.	-9661.	44997.	-0.6	-.0052 269.
7:55:37	1.415	84614.	-9405.	44983.	-0.6	-.0068 268.
7:55:38	1.415	83305.	-9159.	44968.	-0.6	-.0134 268.
7:55:39	1.414	81995.	-8926.	44955.	-0.6	-.0308 267.
7:55:40	1.413	80683.	-8704.	44941.	-0.6	-.0338 266.
7:55:41	1.413	79370.	-8495.	44927.	-0.6	-.0144 266.
7:55:42	1.413	78056.	-8298.	44912.	-0.6	0.0085 265.
7:55:43	1.413	76739.	-8114.	44897.	-0.6	0.0188 265.
7:55:44	1.414	75420.	-7944.	44884.	-0.5	0.0145 264.
7:55:45	1.414	74099.	-7785.	44872.	-0.4	-.0073 264.
7:55:46	1.413	72777.	-7639.	44864.	-0.3	-.0318 263.
7:55:47	1.412	71454.	-7502.	44860.	-0.1	-.0363 263.
7:55:48	1.411	70132.	-7375.	44859.	0.0	-.0207 262.
7:55:49	1.411	68809.	-7257.	44858.	0.0	0.0028 262.
7:55:50	1.411	67486.	-7144.	44857.	-0.1	0.0084 262.
7:55:51	1.412	66162.	-7037.	44854.	-0.1	0.0035 261.
7:55:52	1.412	64838.	-6902.	44850.	-0.2	-.0106 261.
7:55:53	1.411	63514.	-6829.	44846.	-0.2	-.0162 261.
7:55:54	1.411	62190.	-6726.	44842.	-0.1	-.0133 261.
7:55:55	1.410	60867.	-6622.	44839.	-0.1	-.0215 261.
7:55:56	1.409	59545.	-6519.	44836.	-0.1	-.0391 261.
7:55:57	1.408	58224.	-6416.	44833.	-0.2	-.0396 261.
7:55:58	1.407	56904.	-6314.	44829.	-0.2	-.0145 261.
7:55:59	1.407	55585.	-6212.	44822.	-0.3	0.0195 261.
7:56:00	1.408	54264.	-6111.	44816.	-0.3	0.0628 261.
7:56:01	1.411	52942.	-6012.	44809.	-0.3	0.0944 261.
7:56:02	1.414	51617.	-5914.	44803.	-0.2	0.0870 261.
7:56:03	1.416	50289.	-5817.	44798.	-0.2	0.0608 261.
7:56:04	1.418	48958.	-5719.	44794.	-0.2	0.0584 261.
7:56:05	1.420	47626.	-5622.	44790.	-0.2	0.0808 261.
7:56:06	1.423	46292.	-5525.	44784.	-0.3	0.0859 261.
7:56:07	1.426	44954.	-5430.	44777.	-0.3	0.0624 261.
7:56:08	1.427	43615.	-5336.	44770.	-0.3	0.0313 261.
7:56:09	1.428	42274.	-5243.	44763.	-0.3	0.0247 261.
7:56:10	1.429	40932.	-5150.	44757.	-0.2	0.0529 261.
7:56:11	1.431	39589.	-5056.	44752.	-0.2	0.0746 261.

(CONTINUED)



F-18 AT 1.4M AT 44.7K MSL  
BOOM AT SITE 00 AT 0757 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
7:56:12	1.434	38244.	-4963.	44747.	-0.2	0.0730	261.
7:56:13	1.436	36896.	-4869.	44744.	-0.1	0.0657	261.
7:56:14	1.438	35546.	-4776.	44741.	-0.1	0.0668	261.
7:56:15	1.441	34194.	-4681.	44740.	0.0	0.0733	261.
7:56:16	1.443	32839.	-4588.	44740.	0.0	0.0625	261.
7:56:17	1.445	31483.	-4494.	44742.	0.1	0.0518	261.
7:56:18	1.446	30124.	-4402.	44744.	0.1	0.0451	261.
7:56:19	1.448	28765.	-4310.	44747.	0.1	0.0455	261.
7:56:20	1.450	27403.	-4220.	44748.	0.0	0.0693	261.
7:56:21	1.452	26040.	-4129.	44748.	0.0	0.0915	261.
7:56:22	1.456	24673.	-4040.	44747.	-0.1	0.0755	261.
7:56:23	1.457	23305.	-3951.	44743.	-0.2	0.0148	261.
7:56:24	1.456	21935.	-3862.	44738.	-0.2	-.0514	261.
7:56:25	1.454	20567.	-3773.	44732.	-0.3	-.0936	261.
7:56:26	1.450	19203.	-3685.	44726.	-0.2	-.1313	261.
7:56:27	1.445	17842.	-3597.	44720.	-0.2	-.1765	261.
7:56:28	1.439	16487.	-3509.	44715.	-0.2	-.2091	261.
7:56:29	1.431	15138.	-3422.	44709.	-0.2	-.2209	261.
7:56:30	1.424	13797.	-3336.	44703.	-0.3	-.2196	261.
7:56:31	1.416	12462.	-3251.	44695.	-0.3	-.2213	261.
7:56:32	1.409	11135.	-3166.	44687.	-0.3	-.2336	261.
7:56:33	1.401	9815.	-3080.	44680.	-0.3	-.2394	261.
7:56:34	1.393	8503.	-2994.	44675.	-0.1	-.2269	261.
7:56:35	1.385	7198.	-2906.	44675.	0.1	-.2170	261.
7:56:36	1.378	5900.	-2818.	44681.	0.3	-.2089	261.
7:56:37	1.371	4609.	-2730.	44690.	0.5	-.2094	261.
7:56:38	1.365	3325.	-2642.	44703.	0.6	-.2093	261.
7:56:39	1.358	2047.	-2554.	44718.	0.7	-.2064	261.
7:56:40	1.351	776.	-2466.	44721.	0.8	-.2057	261.

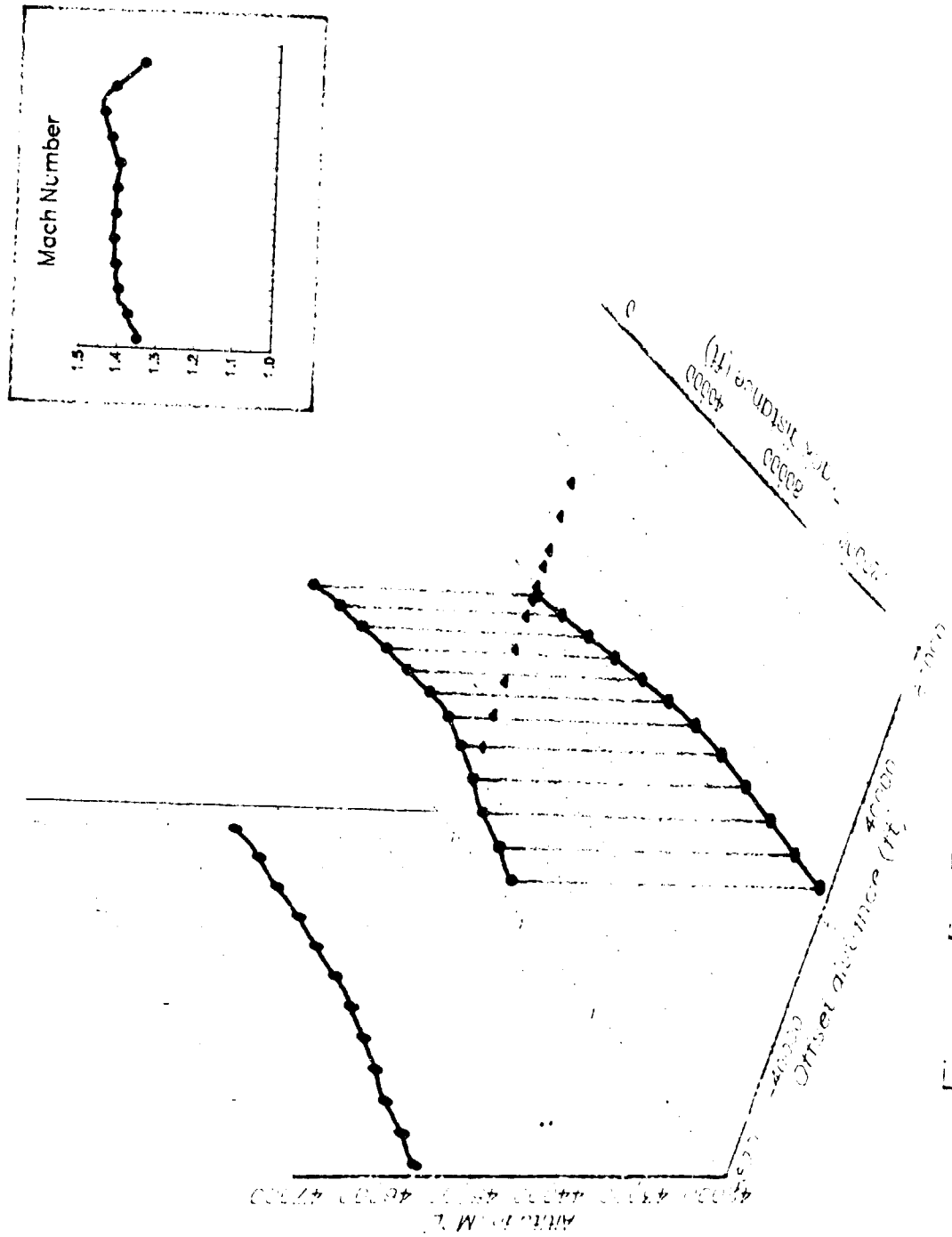


Figure B-32. F-10 on 6 Aug 87 at 0757

F-18 AT 1.1M AT 14.2K MSL  
BOOM AT SITE 00 AT 0810 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:08:32	1.153	145687.	-16482.	15185.	-15.2	-.1525	266.
8:08:33	1.149	144464.	-16297.	14878.	-13.0	-.0911	266.
8:08:34	1.146	143234.	-16114.	14621.	-10.7	-.0305	266.
8:08:35	1.145	141996.	-15930.	14412.	-8.4	0.0136	265.
8:08:36	1.145	140750.	-15747.	14254.	-6.1	0.0160	265.
8:08:37	1.145	139499.	-15564.	14146.	-3.9	-.0507	265.
8:08:38	1.142	138247.	-15380.	14083.	-2.0	-.1289	266.
8:08:39	1.138	136998.	-15194.	14059.	-0.4	-.1529	266.
8:08:40	1.134	135754.	-15008.	14063.	0.7	-.1333	266.
8:08:41	1.130	134515.	-14821.	14086.	1.3	-.0976	266.
8:08:42	1.128	133279.	-14634.	14117.	1.5	-.0619	266.
8:08:43	1.127	132045.	-14448.	14149.	1.4	-.0362	266.
8:08:44	1.126	130811.	-14264.	14177.	1.1	-.0383	266.
8:08:45	1.124	129579.	-14082.	14198.	0.8	-.0714	265.
8:08:46	1.122	128348.	-13901.	14211.	0.4	-.1070	265.
8:08:47	1.118	127121.	-13722.	14217.	0.1	-.1085	265.
8:08:48	1.116	125896.	-13545.	14218.	0.0	-.0768	265.
8:08:49	1.114	124674.	-13368.	14218.	0.0	-.0290	265.
8:08:50	1.114	123453.	-13193.	14219.	0.2	0.0013	265.
8:08:51	1.114	122231.	-13019.	14225.	0.3	-.0037	265.
8:08:52	1.113	121010.	-12847.	14234.	0.5	-.0350	265.
8:08:53	1.112	119790.	-12677.	14244.	0.5	-.0641	265.
8:08:54	1.110	118571.	-12508.	14254.	0.4	-.0793	265.
8:08:55	1.108	117354.	-12340.	14261.	0.2	-.0648	265.
8:08:56	1.106	116140.	-12173.	14264.	0.1	-.0229	265.
8:08:57	1.106	114926.	-12006.	14266.	0.1	0.0123	265.
8:08:58	1.107	113712.	-11840.	14267.	0.1	0.0171	265.
8:08:59	1.107	112497.	-11673.	14271.	0.3	-.0150	265.
8:09:00	1.106	111283.	-11508.	14279.	0.5	-.0680	265.
8:09:01	1.103	110071.	-11343.	14291.	0.7	-.0916	265.
8:09:02	1.101	108861.	-11179.	14308.	0.8	-.0654	265.
8:09:03	1.100	107654.	-11018.	14326.	0.9	-.0062	265.
8:09:04	1.100	106446.	-10860.	14345.	0.8	0.0399	264.
8:09:05	1.102	105236.	-10706.	14360.	0.6	0.0455	264.
8:09:06	1.102	104024.	-10560.	14372.	0.4	0.0036	264.
8:09:07	1.102	102811.	-10420.	14378.	0.2	-.0303	263.
8:09:08	1.101	101597.	-10290.	14380.	0.0	-.0119	263.
8:09:09	1.101	100383.	-10168.	14378.	-0.1	0.0064	262.
8:09:10	1.101	99168.	-10057.	14374.	-0.2	-.0039	262.
8:09:11	1.101	97952.	-9957.	14370.	-0.2	-.0082	261.
8:09:12	1.101	96735.	-9867.	14368.	0.0	-.0005	261.

(CONTINUED)

F-18 AT 1.1M AT 14.2K MSL  
BOOM AT SITE 00 AT 0810 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:09:13	1.101	95518.	-9787.	14369.	0.1	-.0076	260.
8:09:14	1.100	94300.	-9716.	14371.	0.1	-.0225	260.
8:09:15	1.100	93083.	-9652.	14374.	0.1	-.0213	260.
8:09:16	1.099	91866.	-9594.	14376.	0.1	-.0072	259.
8:09:17	1.099	90649.	-9540.	14377.	0.0	-.0154	259.
8:09:18	1.099	89433.	-9489.	14378.	0.0	-.0059	259.
8:09:19	1.099	88216.	-9440.	14378.	0.0	-.0031	259.
8:09:20	1.098	87000.	-9394.	14378.	0.0	0.0039	259.
8:09:21	1.099	85783.	-9350.	14378.	0.0	0.0300	259.
8:09:22	1.100	84566.	-9308.	14377.	-0.1	0.0511	259.
8:09:23	1.102	83346.	-9267.	14374.	-0.1	0.0534	259.
8:09:24	1.103	82125.	-9229.	14371.	-0.2	0.0262	259.
8:09:25	1.103	80903.	-9192.	14366.	-0.2	0.0085	258.
8:09:26	1.104	79681.	-9156.	14361.	-0.2	0.0111	258.
8:09:27	1.104	78459.	-9123.	14357.	-0.2	0.0016	258.
8:09:28	1.104	77236.	-9091.	14353.	-0.2	0.0011	258.
8:09:29	1.104	76013.	-9061.	14349.	-0.2	-.0097	258.
8:09:30	1.103	74790.	-9035.	14345.	-0.2	-.0309	258.
8:09:31	1.102	73569.	-9011.	14341.	-0.2	-.0383	258.
8:09:32	1.101	72348.	-8989.	14335.	-0.2	-.0302	258.
8:09:33	1.100	71129.	-8967.	14331.	-0.2	-.0095	258.
8:09:34	1.100	69909.	-8946.	14328.	-0.1	-.0038	258.
8:09:35	1.100	68690.	-8926.	14328.	0.1	-.0091	258.
8:09:36	1.100	67472.	-8905.	14330.	0.1	-.0151	258.
8:09:37	1.099	66253.	-8885.	14332.	0.1	-.0010	258.
8:09:38	1.100	65035.	-8865.	14333.	-0.1	0.0355	258.
8:09:39	1.101	63815.	-8846.	14330.	-0.2	0.0499	258.
8:09:40	1.102	62594.	-8829.	14324.	-0.3	0.0136	257.
8:09:41	1.102	61373.	-8814.	14316.	-0.4	-.0298	257.
8:09:42	1.101	60152.	-8800.	14308.	-0.4	-.0396	257.
8:09:43	1.100	58933.	-8788.	14301.	-0.3	-.0123	257.
8:09:44	1.100	57714.	-8778.	14294.	-0.3	0.0240	257.
8:09:45	1.101	56494.	-8769.	14288.	-0.3	0.0399	257.
8:09:46	1.102	55273.	-8760.	14283.	-0.2	0.0323	257.
8:09:47	1.103	54052.	-8752.	14279.	-0.2	0.0168	257.
8:09:48	1.103	52829.	-8744.	14276.	-0.1	0.0100	257.
8:09:49	1.103	51606.	-8736.	14273.	-0.1	0.0007	257.
8:09:50	1.103	50383.	-8728.	14270.	-0.2	-.0248	257.
8:09:51	1.102	49161.	-8720.	14266.	-0.2	-.0431	257.
8:09:52	1.101	47940.	-8712.	14260.	-0.3	-.0120	257.
8:09:53	1.102	46720.	-8705.	14255.	-0.3	0.0543	257.

(CONTINUED)

F-18 AT 1.1M AT 14.2K MSL  
BOOM AT SITE 00 AT 0810 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:09:54	1.104	45498.	-8699.	14249.	-0.3	0.0873	257.
8:09:55	1.106	44273.	-8695.	14242.	-0.3	0.0388	257.
8:09:56	1.106	43047.	-8690.	14236.	-0.3	-.0543	257.
8:09:57	1.103	41823.	-8683.	14230.	-0.2	-.0753	257.
8:09:58	1.102	40601.	-8674.	14225.	-0.2	-.0236	257.
8:09:59	1.102	39380.	-8664.	14220.	-0.3	0.0318	257.
8:10:00	1.104	38157.	-8654.	14213.	-0.4	0.0699	257.
8:10:01	1.106	36933.	-8644.	14205.	-0.4	0.0647	257.
8:10:02	1.107	35707.	-8636.	14196.	-0.4	0.0107	257.
8:10:03	1.106	34480.	-8628.	14187.	-0.4	-.0576	257.
8:10:04	1.104	33255.	-8619.	14180.	-0.3	-.0822	257.
8:10:05	1.102	32032.	-8611.	14176.	-0.2	-.0385	257.
8:10:06	1.102	30811.	-8604.	14173.	-0.1	0.0283	257.
8:10:07	1.103	29589.	-8597.	14171.	-0.1	0.0706	257.
8:10:08	1.105	28365.	-8591.	14169.	-0.1	0.0665	257.
8:10:09	1.107	27138.	-8586.	14166.	-0.1	0.0292	257.
8:10:10	1.107	25911.	-8579.	14163.	-0.2	0.0079	257.
8:10:11	1.107	24683.	-8573.	14158.	-0.2	-.0003	257.
8:10:12	1.107	23456.	-8565.	14152.	-0.3	0.0000	257.
8:10:13	1.107	22228.	-8556.	14145.	-0.4	0.0099	257.
8:10:14	1.108	21000.	-8547.	14136.	-0.4	0.0129	257.
8:10:15	1.108	19772.	-8537.	14128.	-0.4	-.0127	257.
8:10:16	1.107	18544.	-8528.	14119.	-0.4	-.0436	257.
8:10:17	1.106	17317.	-8518.	14112.	-0.3	-.0459	257.
8:10:18	1.105	16092.	-8507.	14105.	-0.3	-.0291	257.
8:10:19	1.104	14868.	-8496.	14100.	-0.2	-.0121	257.
8:10:20	1.104	13644.	-8485.	14096.	-0.2	0.0051	257.
8:10:21	1.104	12420.	-8472.	14093.	-0.1	0.0080	257.
8:10:22	1.104	11196.	-8460.	14091.	-0.1	-.0058	257.
8:10:23	1.104	9972.	-8448.	14090.	-0.1	-.0037	257.
8:10:24	1.104	8748.	-8435.	14089.	-0.1	0.0394	257.
8:10:25	1.106	7523.	-8422.	14086.	-0.1	0.0737	257.
8:10:26	1.108	6296.	-8408.	14084.	-0.1	0.0564	257.
8:10:27	1.109	5067.	-8394.	14081.	-0.1	-.0409	257.
8:10:28	1.105	3839.	-8378.	14079.	-0.1	-.2263	257.
8:10:29	1.095	2619.	-8362.	14076.	-0.2	-.4551	257.
8:10:30	1.079	1412.	-8346.	14071.	-0.3	-.6608	257.
8:10:31	1.058	227.	-8330.	14063.	-0.5	-.7863	257.
8:10:32	1.034	-933.	-8314.	14052.	-0.6	-.8044	257.
8:10:33	1.011	-2068.	-8298.	14042.	-0.4	-.7833	258.
8:10:34	0.988	-3178.	-8278.	14038.	0.1	-.7673	258.

(CONTINUED)

F-18 AT 1.1M AT 14.2K MSL  
BOOM AT SITE 00 AT 0810 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:10:35	0.966	-4262.	-8246.	14047.	1.0	-.7278	259.
8:10:36	0.947	-5323.	-8193.	14074.	2.0	-.6382	260.
8:10:37	0.930	-6360.	-8110.	14120.	3.1	-.5195	262.
8:10:38	0.917	-7377.	-7993.	14183.	3.9	-.4046	265.
8:10:39	0.906	-8374.	-7841.	14256.	4.4	-.3629	267.
8:10:40	0.895	-9353.	-7656.	14334.	4.5	-.3776	269.
8:10:41	0.885	-10313.	-7440.	14411.	4.5	-.3813	271.
8:10:42	0.874	-11252.	-7195.	14485.	4.3	-.3821	273.
8:10:43	0.863	-12171.	-6920.	14556.	4.3	-.3619	275.
8:10:44	0.853	-13066.	-6614.	14626.	4.3	-.3339	278.
8:10:45	0.844	-13936.	-6275.	14697.	4.5	-.3504	280.
8:10:46	0.833	-14777.	-5899.	14771.	4.8	-.4048	283.
8:10:47	0.821	-15584.	-5487.	14848.	5.0	-.4381	287.
8:10:48	0.809	-16354.	-5039.	14927.	5.1	-.4182	290.
8:10:49	0.798	-17086.	-4560.	15005.	5.1	-.3604	293.
8:10:50	0.788	-17783.	-4053.	15080.	4.9	-.3084	296.
8:10:51	0.779	-18448.	-3523.	15151.	4.6	-.2781	298.
8:10:52	0.771	-19084.	-2973.	15216.	4.2	-.2725	300.
8:10:53	0.763	-19689.	-2403.	15275.	3.9	-.2838	303.
8:10:54	0.755	-20262.	-1816.	15330.	3.6	-.2991	305.
8:10:55	0.746	-20803.	-1214.	15380.	3.4	-.3069	308.
8:10:56	0.737	-21310.	-598.	15428.	3.4	-.3098	310.
8:10:57	0.728	-21785.	30.	15474.	3.4	-.3036	312.
8:10:58	0.720	-22229.	667.	15521.	3.4	-.2760	315.
8:10:59	0.712	-22641.	1313.	15568.	3.5	-.2366	317.
8:11:00	0.706	-23021.	1968.	15615.	3.5	-.1956	319.

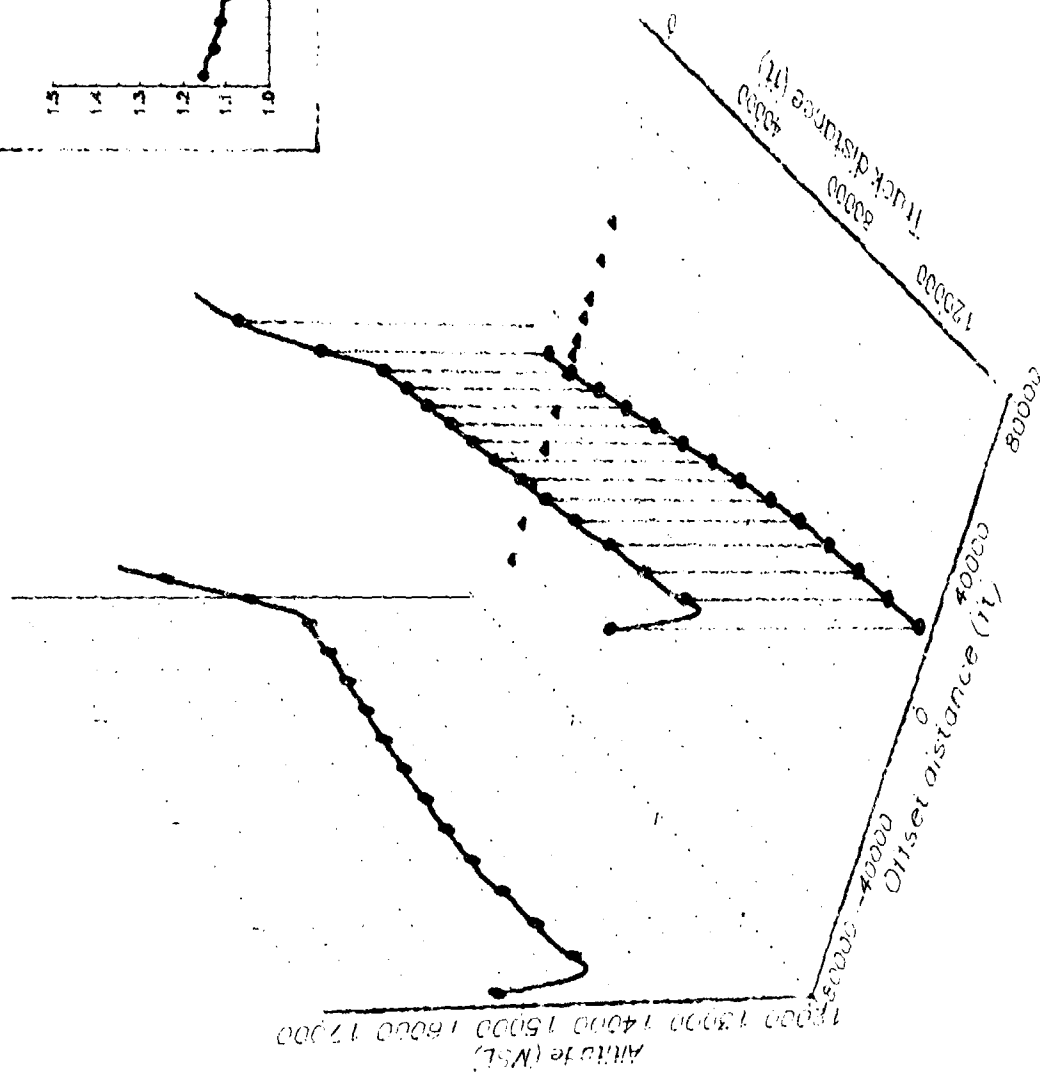
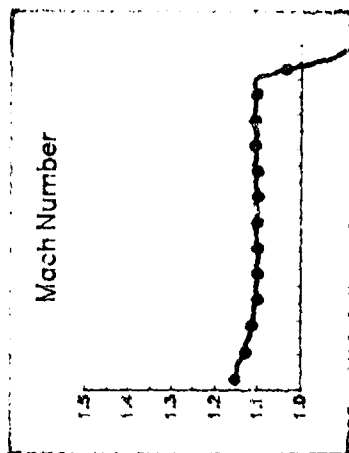


Figure B-33. F-18 on 6 Aug 87 at 0210

F-18 AT 1.3M AT 30K MSL  
BOOM AT SITE 00 AT 1022 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:20:45	1.308	145673.	-3064.	33751.	-3.1	0.0051	258.
10:20:46	1.308	144356.	-3026.	33677.	-3.3	0.0038	258.
10:20:47	1.307	143039.	-2986.	33600.	-3.4	0.0059	258.
10:20:48	1.307	141722.	-2947.	33519.	-3.6	0.0266	258.
10:20:49	1.308	140404.	-2907.	33431.	-3.9	0.0597	258.
10:20:50	1.309	139085.	-2867.	33337.	-4.3	0.0984	258.
10:20:51	1.312	137764.	-2827.	33232.	-4.7	0.1106	258.
10:20:52	1.314	136440.	-2788.	33117.	-5.2	0.0989	258.
10:20:53	1.316	135113.	-2749.	32992.	-5.6	0.0704	258.
10:20:54	1.316	133785.	-2710.	32855.	-6.0	0.0319	258.
10:20:55	1.315	132457.	-2671.	32711.	-6.3	0.0082	258.
10:20:56	1.314	131130.	-2631.	32559.	-6.5	0.0144	259.
10:20:57	1.313	129802.	-2589.	32405.	-6.6	0.0475	259.
10:20:58	1.313	128473.	-2547.	32251.	-6.5	0.0648	259.
10:20:59	1.313	127142.	-2503.	32101.	-6.3	0.0475	259.
10:21:00	1.313	125808.	-2459.	31957.	-6.0	0.0273	259.
10:21:01	1.312	124473.	-2413.	31818.	-5.8	0.0153	259.
10:21:02	1.311	123137.	-2367.	31684.	-5.6	0.0112	259.
10:21:03	1.311	121800.	-2321.	31555.	-5.4	0.0188	259.
10:21:04	1.310	120462.	-2275.	31428.	-5.3	0.0232	259.
10:21:05	1.309	119124.	-2230.	31303.	-5.3	-.0001	259.
10:21:06	1.308	117785.	-2185.	31177.	-5.4	-.0217	259.
10:21:07	1.306	116447.	-2140.	31051.	-5.4	-.0165	259.
10:21:08	1.304	115110.	-2095.	30926.	-5.3	0.0112	259.
10:21:09	1.304	113772.	-2049.	30804.	-5.0	0.0463	259.
10:21:10	1.305	112432.	-2003.	30691.	-4.6	0.0345	259.
10:21:11	1.304	111090.	-1958.	30589.	-4.0	-.0176	259.
10:21:12	1.302	109747.	-1914.	30502.	-3.4	-.0644	259.
10:21:13	1.299	108406.	-1872.	30431.	-2.7	-.0886	259.
10:21:14	1.296	107067.	-1830.	30376.	-2.0	-.0948	258.
10:21:15	1.293	105730.	-1790.	30337.	-1.3	-.0784	258.
10:21:16	1.291	104395.	-1751.	30313.	-0.7	-.0345	258.
10:21:17	1.290	103062.	-1713.	30303.	-0.2	0.0312	258.
10:21:18	1.292	101727.	-1676.	30303.	0.2	0.0741	258.
10:21:19	1.294	100390.	-1640.	30310.	0.4	0.0683	258.
10:21:20	1.296	99051.	-1605.	30322.	0.5	0.0417	258.
10:21:21	1.297	97711.	-1571.	30334.	0.5	0.0307	258.
10:21:22	1.299	96369.	-1539.	30344.	0.4	0.0407	258.
10:21:23	1.300	95027.	-1508.	30350.	0.2	0.0439	258.
10:21:24	1.301	93682.	-1478.	30352.	0.0	0.0183	258.
10:21:25	1.301	92338.	-1449.	30349.	-0.2	-.0188	258.

(CONTINUED)



F-18 AT 1.3M AT 30K MSL  
BOOM AT SITE 00 AT 1022 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:21:26	1.300	90993.	-1419.	30345.	-0.2	-.0235	258.
10:21:27	1.300	89650.	-1390.	30340.	-0.2	0.0023	258.
10:21:28	1.300	88306.	-1361.	30336.	-0.1	0.0325	258.
10:21:29	1.302	86961.	-1333.	30333.	-0.1	0.0605	258.
10:21:30	1.304	85615.	-1307.	30330.	-0.2	0.0785	258.
10:21:31	1.306	84265.	-1282.	30326.	-0.2	0.0715	258.
10:21:32	1.308	82914.	-1259.	30321.	-0.2	0.0134	258.
10:21:33	1.307	81562.	-1237.	30318.	-0.1	-.0656	258.
10:21:34	1.304	80212.	-1216.	30316.	-0.1	-.0742	258.
10:21:35	1.303	78865.	-1195.	30315.	0.0	0.0016	258.
10:21:36	1.304	77517.	-1174.	30314.	0.0	0.0882	258.
10:21:37	1.308	76167.	-1153.	30313.	-0.1	0.1350	258.
10:21:38	1.312	74812.	-1133.	30311.	-0.1	0.1215	258.
10:21:39	1.315	73454.	-1113.	30309.	-0.1	0.0399	258.
10:21:40	1.315	72094.	-1093.	30306.	-0.1	-.0412	258.
10:21:41	1.313	70736.	-1074.	30306.	0.0	-.0833	258.
10:21:42	1.310	69380.	-1054.	30306.	0.1	-.0872	258.
10:21:43	1.308	68027.	-1035.	30309.	0.1	-.0408	258.
10:21:44	1.308	66675.	-1016.	30313.	0.2	0.0277	257.
10:21:45	1.309	65322.	-998.	30316.	0.1	0.0687	257.
10:21:46	1.312	63967.	-982.	30319.	0.1	0.0824	257.
10:21:47	1.314	62610.	-967.	30320.	0.0	0.0840	257.
10:21:48	1.317	61249.	-953.	30319.	-0.1	0.0749	257.
10:21:49	1.319	59887.	-940.	30317.	-0.2	0.0406	257.
10:21:50	1.319	58523.	-926.	30311.	-0.3	-.0209	257.
10:21:51	1.317	57160.	-912.	30303.	-0.4	-.0693	257.
10:21:52	1.315	55799.	-896.	30293.	-0.5	-.0581	257.
10:21:53	1.314	54440.	-880.	30282.	-0.5	0.0023	257.
10:21:54	1.315	53080.	-864.	30269.	-0.5	0.0549	257.
10:21:55	1.317	51719.	-849.	30257.	-0.5	0.0687	257.
10:21:56	1.319	50356.	-833.	30245.	-0.5	0.0652	257.
10:21:57	1.321	48991.	-818.	30235.	-0.4	0.0576	257.
10:21:58	1.322	47624.	-803.	30225.	-0.4	0.0404	257.
10:21:59	1.323	46256.	-788.	30217.	-0.3	0.0025	257.
10:22:00	1.322	44887.	-774.	30209.	-0.3	-.0084	257.
10:22:01	1.323	43519.	-759.	30202.	-0.3	0.0192	257.
10:22:02	1.323	42150.	-745.	30196.	-0.3	0.0382	257.
10:22:03	1.324	40780.	-732.	30189.	-0.3	0.0190	257.
10:22:04	1.324	39409.	-719.	30182.	-0.3	-.0029	257.
10:22:05	1.324	38039.	-705.	30173.	-0.4	-.0069	257.
10:22:06	1.324	36668.	-691.	30162.	-0.5	-.0166	257.

(CONTINUED)

F-18 AT 1.3M AT 30K MSL  
BOOM AT SITE 00 AT 1022 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:22:07	1.323	35299.	-675.	30150.	-0.5	-.0238	257.
10:22:08	1.322	33930.	-659.	30138.	-0.5	-.0171	257.
10:22:09	1.322	32561.	-642.	30127.	-0.5	-.0073	257.
10:22:10	1.322	31193.	-625.	30116.	-0.4	0.0011	257.
10:22:11	1.322	29824.	-608.	30106.	-0.4	0.0028	257.
10:22:12	1.321	28456.	-590.	30096.	-0.4	-.0091	257.
10:22:13	1.321	27088.	-573.	30087.	-0.4	-.0165	257.
10:22:14	1.321	25720.	-554.	30078.	-0.4	-.0078	257.
10:22:15	1.320	24353.	-536.	30069.	-0.4	-.0033	257.
10:22:16	1.320	22986.	-516.	30058.	-0.4	-.0006	258.
10:22:17	1.320	21619.	-497.	30048.	-0.4	0.0185	258.
10:22:18	1.321	20251.	-477.	30039.	-0.4	0.0383	257.
10:22:19	1.322	18882.	-458.	30031.	-0.3	0.0384	257.
10:22:20	1.323	17512.	-440.	30024.	-0.3	0.0271	257.
10:22:21	1.324	16141.	-421.	30017.	-0.3	0.0189	257.
10:22:22	1.324	14769.	-402.	30009.	-0.4	-.0429	258.
10:22:23	1.321	13399.	-381.	29999.	-0.5	-.1316	258.
10:22:24	1.317	12033.	-359.	29986.	-0.5	-.1187	258.
10:22:25	1.314	10670.	-336.	29973.	-0.6	-.0160	258.
10:22:26	1.315	9308.	-313.	29960.	-0.4	0.0400	258.
10:22:27	1.315	7945.	-290.	29954.	0.0	-.0316	258.
10:22:28	1.312	6584.	-266.	29961.	0.7	-.1756	258.
10:22:29	1.305	5228.	-239.	29989.	1.7	-.3222	258.
10:22:30	1.294	3883.	-210.	30041.	2.8	-.4313	258.
10:22:31	1.280	2553.	-176.	30121.	4.0	-.4897	258.
10:22:32	1.265	1240.	-138.	30226.	5.2	-.4951	258.
10:22:33	1.252	-54.	-98.	30356.	6.3	-.4540	259.
10:22:34	1.240	-1331.	-55.	30509.	7.3	-.4085	259.
10:22:35	1.229	-2593.	-11.	30682.	8.3	-.3951	259.
10:22:36	1.218	-3839.	33.	30873.	9.1	-.3914	259.
10:22:37	1.208	-5070.	79.	31079.	9.8	-.3809	259.
10:22:38	1.199	-6286.	129.	31296.	10.3	-.3585	259.
10:22:39	1.190	-7489.	186.	31521.	10.8	-.3568	260.
10:22:40	1.180	-8678.	253.	31754.	11.2	-.3708	260.
10:22:41	1.170	-9853.	336.	31994.	11.8	-.3906	261.
10:22:42	1.160	-11011.	439.	32245.	12.5	-.4184	263.
10:22:43	1.150	-12150.	564.	32509.	13.3	-.4347	264.
10:22:44	1.139	-13268.	710.	32787.	14.2	-.4328	265.
10:22:45	1.128	-14365.	878.	33082.	15.2	-.4346	266.
10:22:46	1.116	-15439.	1065.	33393.	16.3	-.4533	268.
10:22:47	1.103	-16490.	1270.	33719.	17.3	-.4797	269.

(CONTINUED)

F-18 AT 1.3M AT 30K MSL  
BOOM AT SITE 00 AT 1022 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:22:48	1.090	-17516.	1492.	34057.	18.0	-.4917	270.
10:22:49	1.078	-18520.	1730.	34402.	18.5	-.4645	271.
10:22:50	1.067	-19504.	1982.	34747.	18.6	-.4083	272.
10:22:51	1.057	-20471.	2247.	35088.	18.5	-.3538	273.
10:22:52	1.049	-21424.	2525.	35422.	18.2	-.3236	274.
10:22:53	1.042	-22364.	2815.	35748.	17.9	-.3256	275.
10:22:54	1.035	-23291.	3117.	36065.	17.6	-.3450	276.
10:22:55	1.026	-24205.	3430.	36375.	17.3	-.3612	277.
10:22:56	1.017	-25104.	3756.	36676.	17.0	-.3630	278.
10:22:57	1.008	-25987.	4095.	36970.	16.8	-.3486	279.
10:22:58	1.000	-26853.	4449.	37257.	16.6	-.3302	281.
10:22:59	0.993	-27701.	4818.	37540.	16.5	-.3105	282.
10:23:00	0.985	-28532.	5202.	37820.	16.6	-.2994	283.
10:23:01	0.978	-29343.	5602.	38100.	16.7	-.3043	285.
10:23:02	0.968	-30134.	6017.	38379.	16.9	-.3219	286.
10:23:03	0.958	-30904.	6447.	38659.	17.2	-.3317	288.
10:23:04	0.948	-31650.	6893.	38939.	17.3	-.3184	290.
10:23:05	0.938	-32374.	7354.	39216.	17.3	-.2823	292.
10:23:06	0.929	-33076.	7833.	39489.	17.2	-.2354	293.
10:23:07	0.922	-33756.	8329.	39757.	16.9	-.2004	295.
10:23:08	0.915	-34416.	8843.	40018.	16.5	-.1894	297.
10:23:09	0.908	-35057.	9373.	40268.	15.9	-.1991	299.
10:23:10	0.900	-35682.	9917.	40504.	15.0	-.2023	300.
10:23:11	0.893	-36293.	10471.	40724.	14.0	-.1816	301.
10:23:12	0.887	-36891.	11036.	40929.	13.1	-.1570	302.
10:23:13	0.882	-37475.	11611.	41117.	12.1	-.1487	303.
10:23:14	0.877	-38046.	12196.	41290.	11.2	-.1417	305.
10:23:15	0.873	-38601.	12793.	41448.	10.2	-.1232	306.

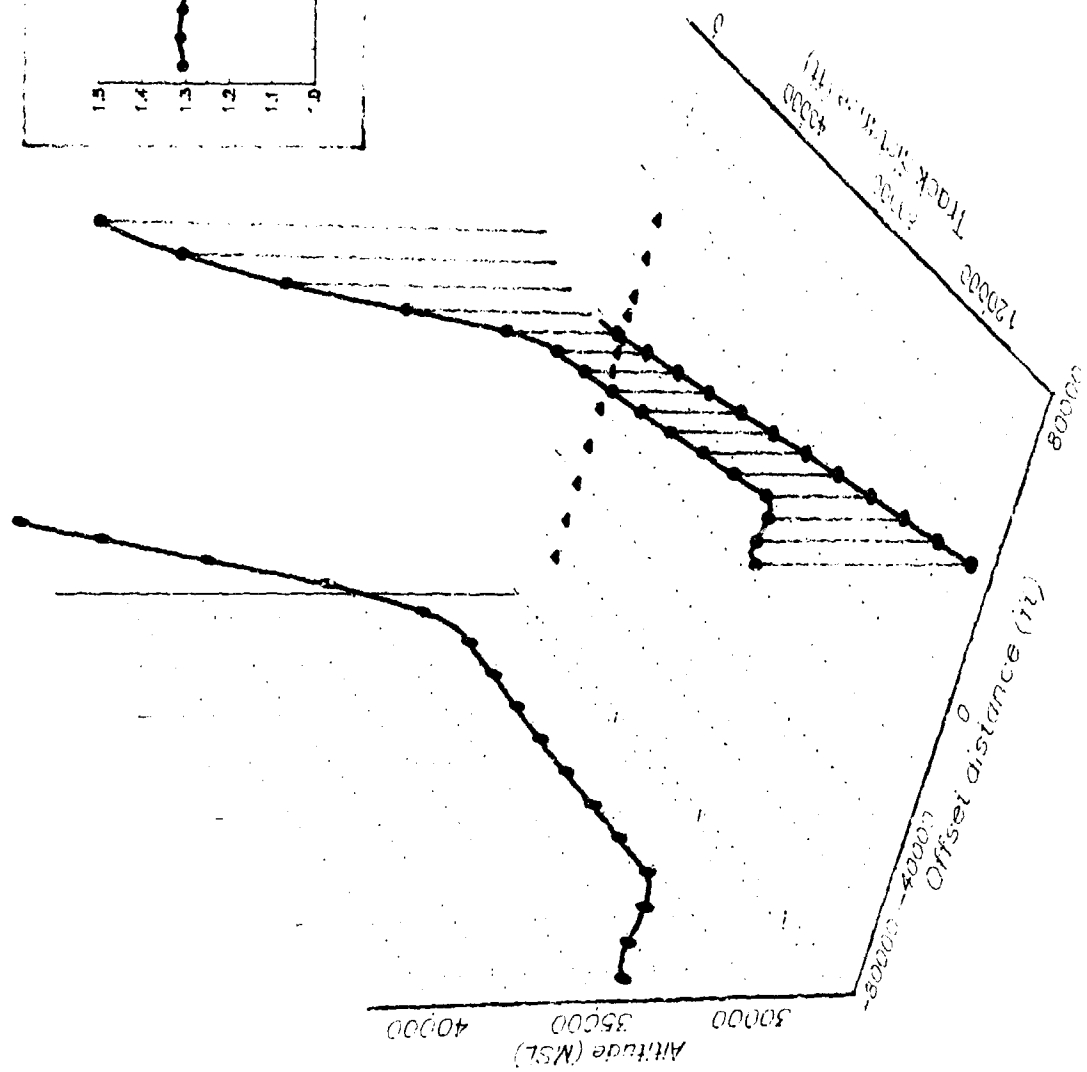


Figure B-34. F-18 on 6 Aug 87 at 1022

F-18 AT 1.43M AT 45K MSL  
BOOM AT SITE 00 AT 1034 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:31:55	1.239	148794.	-1851.	46069.	0.3	0.1858	258.
10:31:56	1.245	147635.	-1827.	46073.	0.1	0.1864	258.
10:31:57	1.252	146471.	-1805.	46074.	0.0	0.1842	258.
10:31:58	1.258	145300.	-1784.	46073.	-0.1	0.1649	258.
10:31:59	1.262	144124.	-1764.	46071.	-0.1	0.1017	258.
10:32:00	1.265	142945.	-1745.	46068.	-0.1	0.0253	258.
10:32:01	1.265	141764.	-1726.	46066.	0.0	0.0041	258.
10:32:02	1.265	140584.	-1705.	46067.	0.1	0.0468	258.
10:32:03	1.268	139402.	-1684.	46070.	0.2	0.1101	258.
10:32:04	1.273	138216.	-1663.	46074.	0.2	0.1499	258.
10:32:05	1.278	137026.	-1642.	46080.	0.2	0.1411	258.
10:32:06	1.282	135832.	-1622.	46084.	0.2	0.1109	258.
10:32:07	1.285	134634.	-1602.	46088.	0.1	0.1020	258.
10:32:08	1.289	133432.	-1581.	46089.	0.0	0.1019	258.
10:32:09	1.292	132228.	-1561.	46087.	-0.2	0.1000	258.
10:32:10	1.295	131020.	-1539.	46082.	-0.3	0.0915	258.
10:32:11	1.298	129809.	-1518.	46072.	-0.5	0.0994	258.
10:32:12	1.302	128595.	-1498.	46059.	-0.7	0.1107	258.
10:32:13	1.306	127377.	-1478.	46040.	-0.9	0.1100	258.
10:32:14	1.310	126156.	-1459.	46019.	-1.1	0.1131	258.
10:32:15	1.314	124931.	-1440.	45994.	-1.2	0.1264	258.
10:32:16	1.319	123703.	-1422.	45968.	-1.2	0.1344	258.
10:32:17	1.323	122470.	-1403.	45941.	-1.2	0.1240	258.
10:32:18	1.327	121233.	-1384.	45915.	-1.2	0.1043	258.
10:32:19	1.331	119993.	-1364.	45888.	-1.2	0.0914	258.
10:32:20	1.334	118749.	-1344.	45863.	-1.1	0.0906	258.
10:32:21	1.337	117503.	-1324.	45839.	-1.1	0.0904	258.
10:32:22	1.340	116254.	-1303.	45815.	-1.0	0.0925	258.
10:32:23	1.344	115002.	-1281.	45793.	-1.0	0.1354	258.
10:32:24	1.349	113746.	-1259.	45770.	-1.0	0.1817	258.
10:32:25	1.356	112484.	-1237.	45747.	-1.1	0.2047	258.
10:32:26	1.363	111215.	-1214.	45722.	-1.1	0.2032	258.
10:32:27	1.369	109940.	-1192.	45697.	-1.2	0.1661	258.
10:32:28	1.374	108660.	-1170.	45670.	-1.2	0.1010	258.
10:32:29	1.376	107376.	-1149.	45641.	-1.2	0.0448	258.
10:32:30	1.377	106091.	-1128.	45613.	-1.2	0.0133	258.
10:32:31	1.378	104806.	-1108.	45586.	-1.2	0.0170	258.
10:32:32	1.379	103520.	-1087.	45560.	-1.0	0.0578	258.
10:32:33	1.382	102231.	-1065.	45538.	-0.9	0.1097	258.
10:32:34	1.387	100940.	-1043.	45519.	-0.8	0.1527	258.
10:32:35	1.392	99643.	-1021.	45502.	-0.7	0.1710	258.

(CONTINUED)

F-18 AT 1.43M AT 45K MSL  
BOOM AT SITE 00 AT 1034 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:32:36	1.398	98342.	-998.	45487.	-0.7	0.1618	258.
10:32:37	1.403	97035.	-976.	45471.	-0.7	0.1299	258.
10:32:38	1.407	95724.	-953.	45456.	-0.7	0.0955	258.
10:32:39	1.410	94409.	-931.	45439.	-0.7	0.0744	258.
10:32:40	1.412	93093.	-909.	45421.	-0.8	0.0675	258.
10:32:41	1.414	91774.	-888.	45403.	-0.8	0.0695	258.
10:32:42	1.416	90453.	-866.	45385.	-0.8	0.0630	258.
10:32:43	1.418	89130.	-844.	45368.	-0.7	0.0550	258.
10:32:44	1.421	87805.	-821.	45351.	-0.7	0.0619	258.
10:32:45	1.423	86478.	-798.	45336.	-0.6	0.0666	258.
10:32:46	1.425	85149.	-774.	45322.	-0.5	0.0638	258.
10:32:47	1.427	83818.	-751.	45310.	-0.5	0.0452	258.
10:32:48	1.428	82485.	-727.	45300.	-0.4	0.0273	258.
10:32:49	1.429	81152.	-703.	45289.	-0.4	0.0113	258.
10:32:50	1.429	79818.	-679.	45278.	-0.5	0.0080	258.
10:32:51	1.429	78484.	-655.	45267.	-0.5	0.0189	258.
10:32:52	1.431	77150.	-632.	45254.	-0.6	0.0387	258.
10:32:53	1.432	75814.	-610.	45239.	-0.7	0.0506	258.
10:32:54	1.434	74476.	-588.	45222.	-0.7	0.0319	258.
10:32:55	1.434	73138.	-567.	45205.	-0.7	-.0022	258.
10:32:56	1.434	71800.	-546.	45188.	-0.6	-.0110	258.
10:32:57	1.434	70462.	-524.	45174.	-0.6	0.0020	258.
10:32:58	1.434	69123.	-500.	45161.	-0.5	-.0067	258.
10:32:59	1.433	67786.	-476.	45151.	-0.4	-.0409	258.
10:33:00	1.431	66449.	-451.	45142.	-0.3	-.0456	258.
10:33:01	1.431	65114.	-427.	45134.	-0.3	-.0088	258.
10:33:02	1.431	63779.	-403.	45128.	-0.2	0.0165	258.
10:33:03	1.431	62443.	-380.	45123.	-0.2	0.0065	258.
10:33:04	1.431	61108.	-358.	45119.	-0.1	-.0214	258.
10:33:05	1.430	59770.	-336.	45116.	-0.1	-.0382	258.
10:33:06	1.429	58439.	-313.	45113.	-0.1	-.0303	258.
10:33:07	1.428	57106.	-289.	45112.	0.0	0.0111	258.
10:33:08	1.429	55773.	-264.	45112.	0.0	0.0638	258.
10:33:09	1.432	54438.	-239.	45113.	0.1	0.0603	258.
10:33:10	1.433	53101.	-214.	45116.	0.1	-.0006	258.
10:33:11	1.432	51764.	-188.	45120.	0.2	-.0408	258.
10:33:12	1.431	50428.	-162.	45124.	0.2	-.0415	258.
10:33:13	1.429	49094.	-135.	45128.	0.1	-.0204	258.
10:33:14	1.429	47760.	-108.	45131.	0.1	0.0159	258.
10:33:15	1.430	46426.	-81.	45133.	0.1	0.0299	258.
10:33:16	1.431	45091.	-56.	45135.	0.1	-.0043	258.

(CONTINUED)

F-18 AT 1.43M AT 45K MSL  
BOOM AT SITE 00 AT 1034 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:33:17	1.430	43756.	-30.	45137.	0.1	-.0504	258.
10:33:18	1.428	42423.	-3.	45137.	0.0	-.0714	258.
10:33:19	1.426	41091.	25.	45137.	-0.1	-.0512	258.
10:33:20	1.425	39762.	53.	45135.	-0.1	-.0050	258.
10:33:21	1.425	38432.	82.	45131.	-0.2	0.0400	258.
10:33:22	1.427	37102.	109.	45126.	-0.2	0.0659	258.
10:33:23	1.429	35769.	135.	45121.	-0.2	0.0526	258.
10:33:24	1.431	34435.	160.	45116.	-0.2	0.0234	258.
10:33:25	1.431	33099.	185.	45110.	-0.2	0.0169	258.
10:33:26	1.432	31764.	209.	45104.	-0.3	0.0220	258.
10:33:27	1.433	30427.	234.	45097.	-0.3	0.0212	258.
10:33:28	1.433	29090.	259.	45088.	-0.4	-.0081	258.
10:33:29	1.432	27753.	283.	45078.	-0.4	-.0340	258.
10:33:30	1.431	26418.	308.	45069.	-0.4	-.0292	258.
10:33:31	1.430	25083.	333.	45061.	-0.3	-.0360	258.
10:33:32	1.428	23749.	358.	45055.	-0.2	-.0769	258.
10:33:33	1.425	22418.	384.	45050.	-0.2	-.1326	258.
10:33:34	1.419	21091.	409.	45045.	-0.2	-.1872	258.
10:33:35	1.413	19770.	436.	45040.	-0.2	-.1820	258.
10:33:36	1.408	18455.	464.	45034.	-0.3	-.1295	258.
10:33:37	1.404	17143.	493.	45027.	-0.3	-.0790	258.
10:33:38	1.402	15835.	522.	45020.	-0.4	-.0632	258.
10:33:39	1.400	14529.	552.	45010.	-0.4	-.0992	258.
10:33:40	1.395	13225.	583.	45000.	-0.5	-.1609	258.
10:33:41	1.389	11927.	616.	44989.	-0.5	-.1975	258.
10:33:42	1.383	10636.	652.	44977.	-0.6	-.1825	258.
10:33:43	1.377	9350.	690.	44963.	-0.6	-.1340	259.
10:33:44	1.373	8068.	730.	44948.	-0.7	-.0817	259.
10:33:45	1.371	6790.	772.	44930.	-0.8	-.0534	259.
10:33:46	1.369	5513.	815.	44913.	-0.8	-.0808	259.
10:33:47	1.365	4239.	857.	44896.	-0.6	-.1517	259.
10:33:48	1.359	2969.	899.	44885.	-0.4	-.2289	259.
10:33:49	1.351	1707.	941.	44880.	0.0	-.2677	259.
10:33:50	1.342	453.	983.	44885.	0.4	-.2440	259.
10:33:51	1.335	-793.	1026.	44899.	0.8	-.1912	259.
10:33:52	1.329	-2033.	1069.	44920.	1.1	-.1536	259.
10:33:53	1.324	-3268.	1113.	44946.	1.2	-.1581	259.
10:33:54	1.318	-4497.	1157.	44973.	1.2	-.1852	259.
10:33:55	1.312	-5721.	1201.	44998.	1.1	-.2005	259.
10:33:56	1.305	-6938.	1246.	45021.	1.0	-.2292	259.
10:33:57	1.296	-8148.	1292.	45042.	1.0	-.2742	259.

(CONTINUED)

F-18 AT 1.43M AT 45K MSL

(CONTINUED)

BOOM AT SITE 00 AT 1034 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:33:58	1.286	-9349.	1340.	45063.	0.9	-.3061	259.
10:33:59	1.276	-10540.	1390.	45083.	0.9	-.3264	259.
10:34:00	1.265	-11720.	1442.	45103.	1.0	-.3289	259.



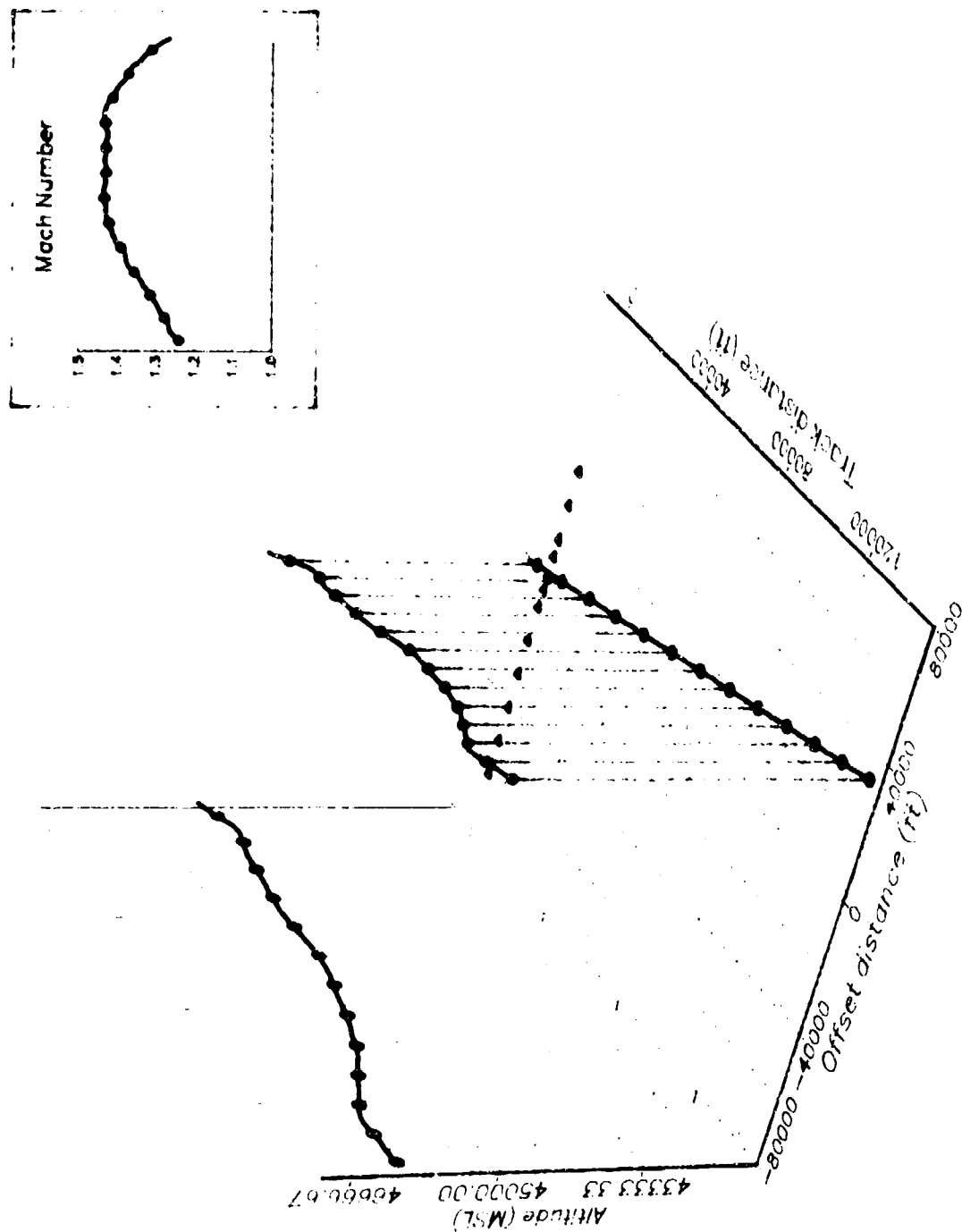


Figure B--35. F-18 on 6 Aug 87 at 1034

F-14 AT 1.2M AT 31.5K MSL  
BOOM AT SITE 00 AT 0828 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:26:45	1.080	129064.	27745.	29867.	-2.7	-.1508	226.
8:26:46	1.076	128095.	27226.	29819.	-2.2	-.1179	228.
8:26:47	1.072	127113.	26735.	29779.	-1.8	-.0786	230.
8:26:48	1.070	126120.	26271.	29748.	-1.4	-.0464	231.
8:26:49	1.069	125117.	25828.	29724.	-1.0	-.0322	232.
8:26:50	1.068	124109.	25399.	29708.	-0.7	-.0397	233.
8:26:51	1.066	123102.	24969.	29697.	-0.4	-.0796	232.
8:26:52	1.062	122105.	24527.	29692.	-0.2	-.1262	231.
8:26:53	1.058	121125.	24057.	29689.	-0.1	-.1317	229.
8:26:54	1.055	120170.	23553.	29689.	0.0	-.0867	226.
8:26:55	1.053	119243.	23009.	29691.	0.1	0.0072	224.
8:26:56	1.055	118341.	22428.	29693.	0.1	0.1165	221.
8:26:57	1.060	117459.	21814.	29696.	0.1	0.1994	220.
8:26:58	1.067	116590.	21174.	29698.	0.1	0.2290	218.
8:26:59	1.073	115728.	20515.	29698.	0.0	0.1908	217.
8:27:00	1.078	114871.	19840.	29699.	0.1	0.1121	217.
8:27:01	1.080	114021.	19152.	29703.	0.4	0.0398	216.
8:27:02	1.081	113182.	18450.	29714.	0.8	-.0099	215.
8:27:03	1.080	112357.	17734.	29735.	1.4	-.0524	214.
8:27:04	1.079	111549.	17004.	29768.	2.1	-.0258	213.
8:27:05	1.079	110758.	16258.	29815.	2.7	-.0120	211.
8:27:06	1.080	109983.	15498.	29872.	3.2	0.0155	210.
8:27:07	1.082	109221.	14726.	29938.	3.5	0.0609	210.
8:27:08	1.085	108470.	13943.	30007.	3.5	0.1040	209.
8:27:09	1.089	107724.	13151.	30076.	3.4	0.1249	208.
8:27:10	1.093	106982.	12350.	30140.	3.1	0.1099	208.
8:27:11	1.096	106241.	11544.	30196.	2.6	0.0802	208.
8:27:12	1.099	105502.	10732.	30243.	2.1	0.0585	208.
8:27:13	1.101	104764.	9916.	30281.	1.6	0.0377	207.
8:27:14	1.102	104028.	9096.	30308.	1.2	0.0057	207.
8:27:15	1.102	103295.	8275.	30327.	0.8	0.0061	207.
8:27:16	1.103	102564.	7450.	30339.	0.4	0.0560	207.
8:27:17	1.105	101834.	6623.	30344.	0.1	0.1163	207.
8:27:18	1.109	101103.	5791.	30344.	-0.1	0.1490	207.
8:27:19	1.114	100372.	4955.	30340.	-0.3	0.1504	207.
8:27:20	1.118	99638.	4114.	30334.	-0.4	0.1364	207.
8:27:21	1.122	98901.	3270.	30325.	-0.4	0.1139	207.
8:27:22	1.125	98162.	2424.	30316.	-0.5	0.0952	206.
8:27:23	1.128	97422.	1575.	30306.	-0.5	0.0923	206.
8:27:24	1.131	96681.	722.	30294.	-0.6	0.0975	206.
8:27:25	1.134	95941.	-134.	30282.	-0.6	0.0976	206.

(CONTINUED)

F-14 AT 1.2M AT 31.5K MSL  
BOOM AT SITE 00 AT 0828 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:27:26	1.137	95200.	-994.	30270.	-0.6	0.0948	206.
8:27:27	1.140	94460.	-1858.	30258.	-0.6	0.1054	206.
8:27:28	1.143	93718.	-2726.	30247.	-0.5	0.1166	206.
8:27:29	1.147	92971.	-3593.	30236.	-0.5	0.1029	206.
8:27:30	1.149	92214.	-4457.	30228.	-0.3	0.0762	207.
8:27:31	1.151	91441.	-5310.	30222.	-0.2	0.0538	208.
8:27:32	1.153	90644.	-6146.	30218.	-0.1	0.0396	210.
8:27:33	1.154	89816.	-6957.	30217.	0.0	0.0428	212.
8:27:34	1.156	88954.	-7736.	30217.	0.0	0.0385	215.
8:27:35	1.157	88054.	-8478.	30219.	0.2	0.0053	217.
8:27:36	1.157	87119.	-9180.	30223.	0.3	-0.0226	220.
8:27:37	1.156	86151.	-9840.	30231.	0.4	-0.0156	222.
8:27:38	1.157	85154.	-10458.	30241.	0.5	0.0126	225.
8:27:39	1.158	84129.	-11035.	30253.	0.5	0.0400	227.
8:27:40	1.160	83080.	-11575.	30264.	0.5	0.0579	229.
8:27:41	1.162	82008.	-12078.	30271.	0.3	0.0619	231.
8:27:42	1.164	80918.	-12547.	30275.	0.0	0.0517	233.
8:27:43	1.165	79812.	-12986.	30272.	-0.3	0.0473	235.
8:27:44	1.167	78691.	-13397.	30264.	-0.5	0.0703	236.
8:27:45	1.170	77557.	-13780.	30251.	-0.7	0.1016	238.
8:27:46	1.173	76410.	-14136.	30236.	-0.8	0.1135	239.
8:27:47	1.176	75250.	-14463.	30219.	-0.8	0.1016	241.
8:27:48	1.179	74077.	-14760.	30203.	-0.7	0.0853	243.
8:27:49	1.181	72892.	-15023.	30188.	-0.6	0.0583	244.
8:27:50	1.183	71697.	-15251.	30176.	-0.4	0.0250	246.
8:27:51	1.183	70494.	-15444.	30170.	-0.1	0.0088	248.
8:27:52	1.184	69285.	-15602.	30173.	0.4	0.0096	250.
8:27:53	1.184	68071.	-15729.	30187.	1.0	0.0162	251.
8:27:54	1.185	66854.	-15830.	30216.	1.6	0.0367	252.
8:27:55	1.187	65635.	-15911.	30257.	2.2	0.0579	253.
8:27:56	1.190	64413.	-15978.	30311.	2.7	0.0542	254.
8:27:57	1.191	63190.	-16037.	30374.	3.1	0.0202	254.
8:27:58	1.192	61966.	-16091.	30443.	3.3	-0.0261	254.
8:27:59	1.192	60742.	-16144.	30516.	3.5	-0.0383	254.
8:28:00	1.192	59520.	-16197.	30591.	3.6	-0.0080	254.
8:28:01	1.193	58299.	-16250.	30668.	3.6	0.0312	254.
8:28:02	1.195	57076.	-16303.	30745.	3.6	0.0516	254.
8:28:03	1.197	55852.	-16356.	30822.	3.5	0.0527	254.
8:28:04	1.199	54626.	-16407.	30896.	3.3	0.0351	254.
8:28:05	1.201	53399.	-16456.	30966.	3.1	0.0160	254.
8:28:06	1.202	52170.	-16502.	31030.	2.8	0.0151	254.

(CONTINUED)

F-14 AT 1.2M AT 31.5K MSL  
BOOM AT SITE 00 AT 0828 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:28:07	1.203	50941.	-16547.	31088.	2.5	0.0132	255.
8:28:08	1.203	49710.	-16589.	31139.	2.2	0.0061	255.
8:28:09	1.204	48479.	-16630.	31184.	2.0	0.0264	255.
8:28:10	1.206	47248.	-16671.	31226.	1.9	0.0639	255.
8:28:11	1.208	46014.	-16710.	31267.	1.8	0.0774	255.
8:28:12	1.211	44777.	-16750.	31306.	1.8	0.0697	255.
8:28:13	1.213	43539.	-16790.	31344.	1.7	0.0630	255.
8:28:14	1.216	42298.	-16829.	31378.	1.5	0.0647	255.
8:28:15	1.218	41055.	-16867.	31408.	1.2	0.0734	255.
8:28:16	1.220	39809.	-16903.	31431.	0.9	0.0777	255.
8:28:17	1.223	38561.	-16938.	31448.	0.7	0.0597	255.
8:28:18	1.224	37310.	-16972.	31460.	0.5	0.0379	255.
8:28:19	1.226	36059.	-17006.	31470.	0.5	0.0401	255.
8:28:20	1.227	34806.	-17040.	31481.	0.5	0.0570	255.
8:28:21	1.229	33551.	-17074.	31494.	0.6	0.0704	255.
8:28:22	1.232	32294.	-17108.	31506.	0.6	0.0746	255.
8:28:23	1.234	31035.	-17142.	31518.	0.5	0.0758	255.
8:28:24	1.237	29773.	-17175.	31527.	0.3	0.0750	255.
8:28:25	1.239	28509.	-17207.	31532.	0.2	0.0695	255.
8:28:26	1.241	27242.	-17239.	31534.	0.0	0.0653	255.
8:28:27	1.243	25974.	-17270.	31534.	-0.1	0.0662	255.
8:28:28	1.245	24703.	-17302.	31532.	-0.1	0.0664	255.
8:28:29	1.247	23430.	-17335.	31529.	-0.2	0.0672	255.
8:28:30	1.249	22155.	-17368.	31524.	-0.3	0.0681	255.
8:28:31	1.251	20878.	-17402.	31518.	-0.3	0.0699	255.
8:28:32	1.253	19599.	-17434.	31511.	-0.3	0.0775	255.
8:28:33	1.256	18317.	-17466.	31503.	-0.3	0.0803	255.
8:28:34	1.258	17032.	-17496.	31497.	-0.2	0.0759	255.
8:28:35	1.261	15745.	-17524.	31493.	-0.1	0.0693	255.
8:28:36	1.263	14456.	-17552.	31491.	0.0	0.0500	255.
8:28:37	1.263	13165.	-17580.	31494.	0.2	0.0061	255.
8:28:38	1.263	11874.	-17606.	31501.	0.4	-0.0553	255.
8:28:39	1.260	10585.	-17632.	31513.	0.6	-0.1078	256.
8:28:40	1.257	9299.	-17655.	31528.	0.8	-0.1142	256.
8:28:41	1.254	8017.	-17676.	31546.	0.8	-0.0779	256.
8:28:42	1.252	6737.	-17694.	31564.	0.7	-0.0277	256.
8:28:43	1.252	5457.	-17712.	31579.	0.6	0.0166	256.
8:28:44	1.253	4178.	-17730.	31591.	0.4	0.0338	256.
8:28:45	1.255	2897.	-17747.	31599.	0.3	0.0451	256.
8:28:46	1.257	1615.	-17764.	31605.	0.3	0.0835	256.
8:28:47	1.260	330.	-17780.	31611.	0.2	0.1239	256.

(CONTINUED)

F-14 AT 1.2M AT 31.5K MSL  
BOOM AT SITE 00 AT 0828 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
8:28:48	1.264	-959.	-17796.	31616.	0.2	0.1327	256.
8:28:49	1.268	-2252.	-17812.	31619.	0.1	0.0954	256.
8:28:50	1.270	-3548.	-17828.	31621.	0.0	0.0468	256.
8:28:51	1.271	-4845.	-17843.	31621.	-0.1	0.0133	256.
8:28:52	1.271	-6143.	-17859.	31618.	-0.2	0.0173	256.
8:28:53	1.272	-7442.	-17873.	31614.	-0.2	0.0522	256.
8:28:54	1.274	-8742.	-17888.	31607.	-0.3	0.0809	256.
8:28:55	1.277	-10045.	-17902.	31600.	-0.3	0.0926	256.
8:28:56	1.280	-11351.	-17915.	31592.	-0.4	0.0842	256.
8:28:57	1.282	-12659.	-17929.	31583.	-0.4	0.0405	256.
8:28:58	1.282	-13969.	-17943.	31572.	-0.5	-.0261	256.
8:28:59	1.280	-15278.	-17957.	31562.	-0.5	-.0749	256.
8:29:00	1.278	-16585.	-17970.	31550.	-0.5	-.0818	256.

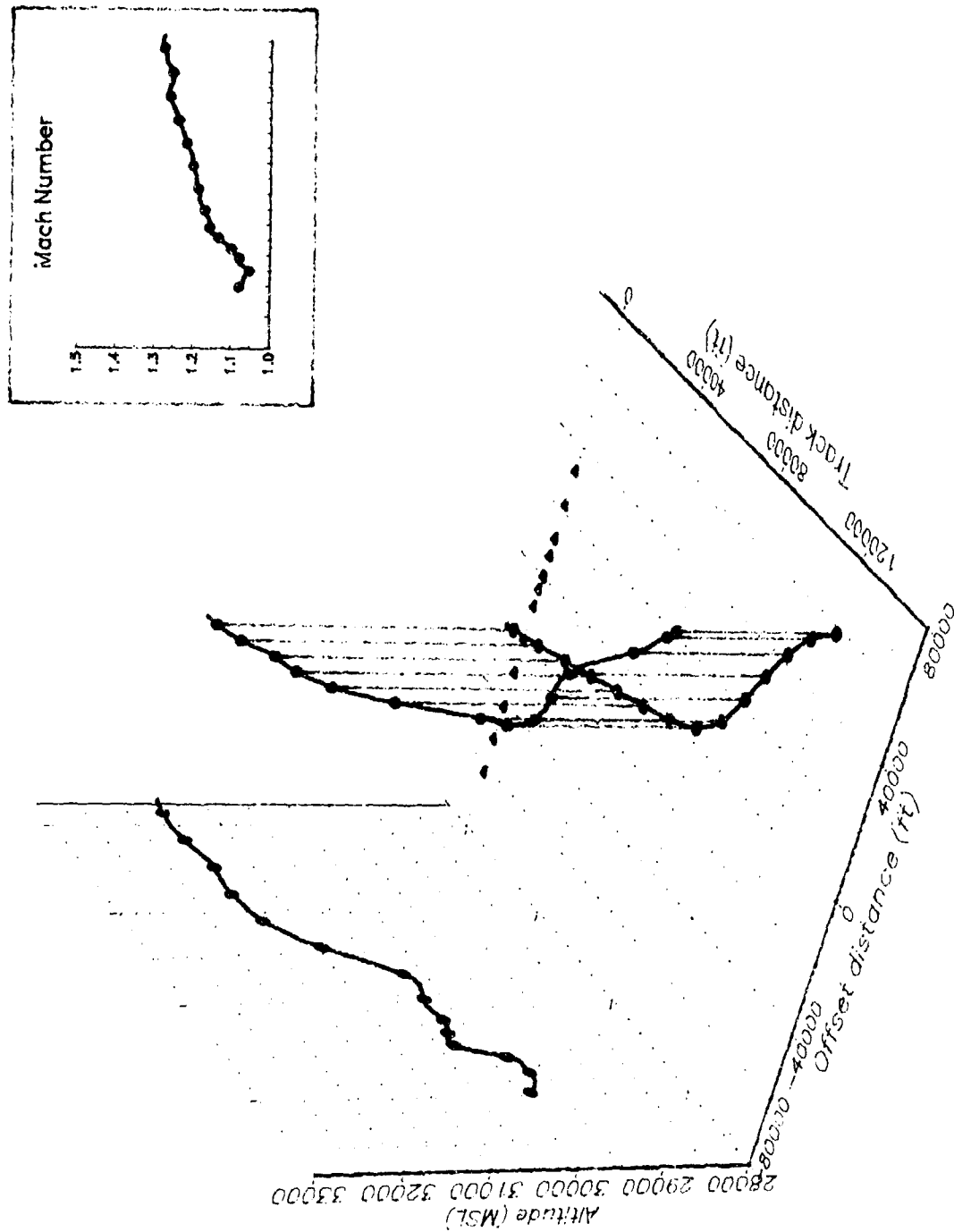


Figure B-36. F-14 on 6 Aug 87 at 0828

F-14 AT 1.27M AT 16.5K MSL  
BOOM AT SITE 00 AT 1043 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:41:15	1.099	184736.	-11990.	16461.	-3.3	0.0702	264.
10:41:16	1.100	183531.	-11840.	16384.	-4.1	0.0824	264.
10:41:17	1.102	182325.	-11685.	16288.	-5.0	0.1151	264.
10:41:18	1.106	181118.	-11525.	16173.	-5.9	0.1820	265.
10:41:19	1.111	179907.	-11361.	16042.	-6.6	0.2439	265.
10:41:20	1.118	178691.	-11193.	15895.	-7.2	0.2646	265.
10:41:21	1.125	177467.	-11023.	15737.	-7.6	0.2412	265.
10:41:22	1.132	176237.	-10852.	15573.	-7.7	0.2140	265.
10:41:23	1.138	174999.	-10681.	15408.	-7.5	0.1997	265.
10:41:24	1.143	173754.	-10513.	15248.	-7.1	0.1961	265.
10:41:25	1.149	172501.	-10349.	15100.	-6.4	0.1985	264.
10:41:26	1.154	171239.	-10190.	14967.	-5.7	0.1883	264.
10:41:27	1.159	169969.	-10038.	14849.	-5.0	0.1710	264.
10:41:28	1.164	168691.	-9891.	14746.	-4.4	0.1550	263.
10:41:29	1.168	167407.	-9751.	14655.	-3.8	0.1324	263.
10:41:30	1.171	166117.	-9616.	14574.	-3.4	0.0965	263.
10:41:31	1.173	164823.	-9488.	14502.	-3.0	0.0648	263.
10:41:32	1.174	163526.	-9363.	14439.	-2.6	0.0530	262.
10:41:33	1.176	162227.	-9241.	14387.	-2.1	0.0579	262.
10:41:34	1.178	160925.	-9120.	14347.	-1.5	0.0795	262.
10:41:35	1.180	159620.	-9000.	14320.	-0.9	0.0847	262.
10:41:36	1.182	158313.	-8880.	14307.	-0.3	0.0675	262.
10:41:37	1.184	157004.	-8758.	14306.	0.2	0.0416	262.
10:41:38	1.185	155693.	-8635.	14316.	0.6	0.0251	262.
10:41:39	1.186	154382.	-8510.	14334.	0.9	0.0157	262.
10:41:40	1.186	153071.	-8382.	14358.	1.1	0.0150	263.
10:41:41	1.187	151760.	-8251.	14385.	1.2	0.0240	263.
10:41:42	1.188	150449.	-8116.	14414.	1.3	0.0406	263.
10:41:43	1.189	149136.	-7977.	14443.	1.3	0.0416	263.
10:41:44	1.190	147823.	-7836.	14472.	1.3	0.0145	263.
10:41:45	1.190	146509.	-7693.	14501.	1.3	-.0204	263.
10:41:46	1.189	145197.	-7548.	14531.	1.4	-.0350	263.
10:41:47	1.189	143885.	-7401.	14564.	1.5	-.0137	263.
10:41:48	1.189	142574.	-7254.	14601.	1.7	0.0266	263.
10:41:49	1.190	141263.	-7105.	14641.	1.8	0.0541	264.
10:41:50	1.192	139950.	-6955.	14683.	1.9	0.0559	264.
10:41:51	1.194	138636.	-6801.	14727.	1.9	0.0424	264.
10:41:52	1.195	137321.	-6645.	14772.	1.9	0.0235	264.
10:41:53	1.195	136006.	-6485.	14815.	1.9	0.0071	264.
10:41:54	1.196	134690.	-6323.	14856.	1.7	0.0005	264.
10:41:55	1.196	133375.	-6157.	14895.	1.6	0.0076	264.

(CONTINUED)

F-14 AT 1.27M AT 16.5K MSL  
BOOM AT SITE 00 AT 1043 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:41:56	1.196	132060.	-5990.	14931.	1.6	0.0185	264.
10:41:57	1.197	130744.	-5821.	14966.	1.6	0.0272	264.
10:41:58	1.198	129428.	-5650.	15003.	1.7	0.0275	265.
10:41:59	1.199	128112.	-5476.	15044.	1.9	0.0124	265.
10:42:00	1.199	126795.	-5301.	15091.	2.2	0.0015	265.
10:42:01	1.199	125479.	-5123.	15143.	2.4	0.0034	265.
10:42:02	1.199	124163.	-4944.	15199.	2.5	0.0084	265.
10:42:03	1.199	122848.	-4762.	15255.	2.4	0.0022	265.
10:42:04	1.199	121532.	-4580.	15308.	2.2	-0.0052	265.
10:42:05	1.199	120217.	-4395.	15355.	1.9	0.0007	265.
10:42:06	1.199	118901.	-4210.	15395.	1.5	0.0159	265.
10:42:07	1.200	117585.	-4022.	15425.	1.2	0.0281	265.
10:42:08	1.201	116268.	-3832.	15448.	0.8	0.0336	265.
10:42:09	1.202	114950.	-3639.	15463.	0.6	0.0414	265.
10:42:10	1.204	113631.	-3443.	15474.	0.4	0.0558	266.
10:42:11	1.205	112311.	-3244.	15483.	0.4	0.0587	266.
10:42:12	1.207	110990.	-3043.	15494.	0.5	0.0426	266.
10:42:13	1.208	109668.	-2838.	15506.	0.6	0.0287	266.
10:42:14	1.209	108345.	-2631.	15521.	0.6	0.0300	266.
10:42:15	1.210	107022.	-2421.	15536.	0.6	0.0323	266.
10:42:16	1.211	105698.	-2208.	15550.	0.6	0.0429	266.
10:42:17	1.212	104373.	-1994.	15562.	0.5	0.0639	266.
10:42:18	1.214	103046.	-1778.	15573.	0.5	0.0640	266.
10:42:19	1.216	101717.	-1561.	15584.	0.5	0.0490	266.
10:42:20	1.217	100388.	-1342.	15597.	0.6	0.0304	267.
10:42:21	1.218	99057.	-1119.	15612.	0.7	0.0176	267.
10:42:22	1.218	97727.	-893.	15631.	0.8	0.0108	267.
10:42:23	1.219	96397.	-665.	15651.	0.9	0.0099	267.
10:42:24	1.219	95067.	-435.	15671.	0.8	0.0271	267.
10:42:25	1.220	93737.	-202.	15690.	0.8	0.0524	267.
10:42:26	1.222	92405.	32.	15707.	0.7	0.0708	267.
10:42:27	1.224	91071.	268.	15723.	0.6	0.0720	267.
10:42:28	1.226	89735.	506.	15734.	0.4	0.0373	267.
10:42:29	1.227	88398.	747.	15741.	0.2	0.0113	267.
10:42:30	1.227	87062.	989.	15744.	0.0	0.0143	268.
10:42:31	1.227	85725.	1234.	15744.	-0.1	0.0213	268.
10:42:32	1.228	84388.	1482.	15740.	-0.2	0.0324	268.
10:42:33	1.229	83050.	1732.	15733.	-0.4	0.0525	268.
10:42:34	1.231	81712.	1985.	15723.	-0.5	0.0822	268.
10:42:35	1.234	80371.	2241.	15710.	-0.6	0.0858	268.
10:42:36	1.236	79028.	2498.	15694.	-0.7	0.0425	268.

(CONTINUED)



F-14 AT 1.27M AT 16.5K MSL  
BOOM AT SITE 00 AT 1043 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:42:37	1.236	77684.	2757.	15677.	-0.7	-.0098	268.
10:42:38	1.235	76340.	3017.	15661.	-0.6	-.0223	268.
10:42:39	1.235	74998.	3277.	15647.	-0.5	0.0090	268.
10:42:40	1.236	73654.	3538.	15637.	-0.3	0.0475	268.
10:42:41	1.238	72310.	3799.	15633.	-0.1	0.0676	268.
10:42:42	1.240	70962.	4058.	15635.	0.2	0.0598	268.
10:42:43	1.241	69613.	4316.	15643.	0.5	0.0377	268.
10:42:44	1.242	68262.	4572.	15656.	0.6	0.0235	268.
10:42:45	1.243	66910.	4827.	15672.	0.7	0.0124	268.
10:42:46	1.243	65558.	5081.	15691.	0.8	0.0117	268.
10:42:47	1.243	64205.	5334.	15711.	0.9	0.0139	268.
10:42:48	1.244	62852.	5588.	15735.	1.1	0.0114	268.
10:42:49	1.244	61499.	5843.	15762.	1.3	0.0014	268.
10:42:50	1.244	60146.	6099.	15794.	1.4	-.0130	268.
10:42:51	1.244	58794.	6357.	15829.	1.5	-.0195	268.
10:42:52	1.243	57442.	6617.	15864.	1.5	-.0045	268.
10:42:53	1.243	56092.	6879.	15899.	1.4	0.0093	268.
10:42:54	1.244	54742.	7145.	15930.	1.3	0.0092	268.
10:42:55	1.244	53392.	7413.	15960.	1.2	0.0043	269.
10:42:56	1.244	52043.	7684.	15989.	1.3	0.0098	269.
10:42:57	1.245	50693.	7954.	16021.	1.5	0.0083	268.
10:42:58	1.245	49341.	8219.	16058.	1.7	0.0027	268.
10:42:59	1.246	47989.	8475.	16101.	1.9	-.0012	268.
10:43:00	1.246	46633.	8717.	16149.	2.1	-.0045	267.
10:43:01	1.247	45275.	8941.	16202.	2.3	-.0114	266.
10:43:02	1.247	43913.	9147.	16257.	2.4	-.0124	265.
10:43:03	1.247	42550.	9331.	16314.	2.5	-.0176	264.
10:43:04	1.247	41183.	9492.	16373.	2.5	-.0326	263.
10:43:05	1.246	39815.	9630.	16433.	2.5	-.0504	262.
10:43:06	1.245	38447.	9744.	16494.	2.6	-.0535	261.
10:43:07	1.245	37078.	9835.	16554.	2.5	-.0218	260.
10:43:08	1.245	35708.	9904.	16613.	2.4	0.0359	259.
10:43:09	1.248	34337.	9953.	16668.	2.2	0.0721	258.
10:43:10	1.250	32963.	9984.	16716.	1.8	0.0434	258.
10:43:11	1.251	31586.	10001.	16755.	1.5	-.0063	257.
10:43:12	1.251	30210.	10007.	16785.	1.1	-.0123	257.
10:43:13	1.251	28833.	10006.	16805.	0.7	0.0147	256.
10:43:14	1.252	27456.	9999.	16816.	0.3	0.0396	256.
10:43:15	1.253	26078.	9990.	16819.	-0.1	0.0487	256.
10:43:16	1.255	24699.	9981.	16814.	-0.4	0.0494	256.
10:43:17	1.256	23317.	9972.	16801.	-0.7	0.0630	256.

(CONTINUED)

F-14 AT 1.27M AT 16.5K MSL  
BOOM AT SITE 00 AT 1043 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:43:18	1.258	21934.	9965.	16783.	-0.9	0.0732	256.
10:43:19	1.260	20549.	9960.	16761.	-1.0	0.0664	256.
10:43:20	1.262	19161.	9957.	16736.	-1.1	0.0541	257.
10:43:21	1.263	17772.	9955.	16710.	-1.1	0.0477	257.
10:43:22	1.264	16381.	9954.	16683.	-1.1	0.0361	257.
10:43:23	1.265	14989.	9954.	16658.	-1.0	0.0464	257.
10:43:24	1.267	13596.	9955.	16634.	-1.0	0.0686	257.
10:43:25	1.269	12200.	9956.	16612.	-0.9	0.0766	257.
10:43:26	1.270	10802.	9958.	16590.	-0.9	0.0611	257.
10:43:27	1.272	9402.	9961.	16567.	-1.0	0.0446	257.
10:43:28	1.273	8000.	9965.	16543.	-1.1	0.0367	257.
10:43:29	1.274	6597.	9970.	16514.	-1.3	0.0312	257.
10:43:30	1.274	5194.	9977.	16481.	-1.5	0.0311	257.

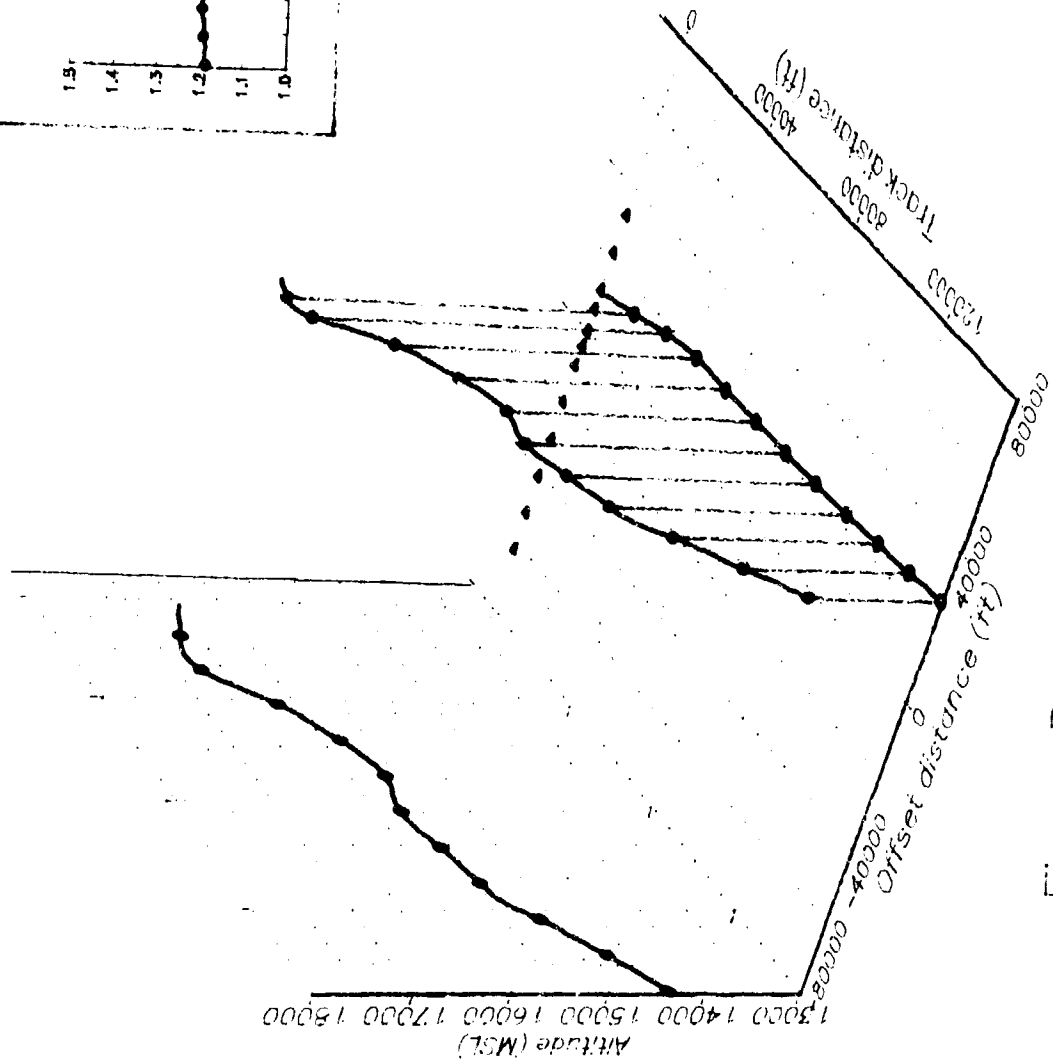
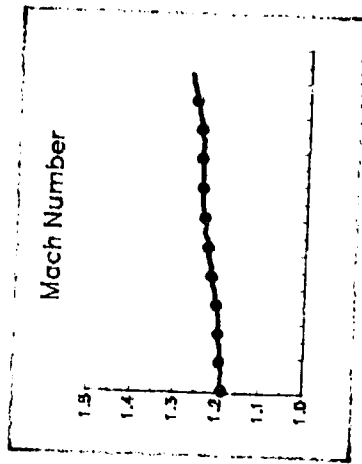


Figure B-37. F-14 on 6 Aug 87 at 1043

F-111 AT 1.2M AT 14K MSL  
BOOM AT SITE 00 AT 1148 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:46:20	1.204	150904.	-13641.	13819.	0.8	-.0335	272.
11:46:21	1.204	149610.	-13309.	13841.	1.1	-.0183	271.
11:46:22	1.203	148311.	-13000.	13868.	1.3	0.0004	270.
11:46:23	1.204	147006.	-12714.	13899.	1.4	0.0158	269.
11:46:24	1.204	145696.	-12451.	13931.	1.4	0.0063	268.
11:46:25	1.204	144381.	-12208.	13963.	1.2	-.0310	267.
11:46:26	1.203	143063.	-11984.	13988.	1.0	-.0413	266.
11:46:27	1.202	141744.	-11774.	14006.	0.6	-.0062	266.
11:46:28	1.202	140424.	-11572.	14014.	0.1	0.0092	266.
11:46:29	1.202	139103.	-11372.	14012.	-0.3	0.0061	266.
11:46:30	1.202	137782.	-11170.	14002.	-0.6	0.0121	266.
11:46:31	1.203	136462.	-10960.	13985.	-0.8	0.0388	266.
11:46:32	1.204	135142.	-10741.	13966.	-0.8	0.0508	267.
11:46:33	1.206	133823.	-10513.	13948.	-0.7	0.0475	267.
11:46:34	1.207	132504.	-10274.	13935.	-0.4	0.0468	268.
11:46:35	1.209	131185.	-10026.	13930.	0.0	0.0439	268.
11:46:36	1.210	129866.	-9770.	13932.	0.2	0.0374	268.
11:46:37	1.211	128547.	-9510.	13937.	0.2	0.0088	268.
11:46:38	1.210	127229.	-9247.	13940.	0.0	-.0316	269.
11:46:39	1.209	125911.	-8984.	13936.	-0.4	-.0363	269.
11:46:40	1.209	124595.	-8721.	13923.	-0.8	0.0134	269.
11:46:41	1.210	123277.	-8459.	13901.	-1.1	0.0660	268.
11:46:42	1.212	121958.	-8198.	13873.	-1.2	0.0734	268.
11:46:43	1.214	120636.	-7939.	13844.	-1.2	0.0342	268.
11:46:44	1.214	119312.	-7683.	13818.	-0.9	-.0098	268.
11:46:45	1.213	117987.	-7432.	13801.	-0.5	-.0167	268.
11:46:46	1.213	116662.	-7187.	13794.	-0.1	0.0091	268.
11:46:47	1.214	115334.	-6951.	13798.	0.4	0.0351	267.
11:46:48	1.215	114004.	-6724.	13812.	0.8	0.0327	267.
11:46:49	1.216	112671.	-6508.	13833.	1.1	0.0129	266.
11:46:50	1.216	111336.	-6303.	13861.	1.3	-.0029	266.
11:46:51	1.215	109999.	-6108.	13892.	1.3	-.0250	265.
11:46:52	1.214	108662.	-5924.	13921.	1.1	-.0459	265.
11:46:53	1.213	107324.	-5751.	13944.	0.8	-.0575	264.
11:46:54	1.211	105987.	-5586.	13959.	0.4	-.0444	264.
11:46:55	1.211	104650.	-5430.	13964.	0.0	0.0224	263.
11:46:56	1.213	103311.	-5281.	13961.	-0.3	0.0956	263.
11:46:57	1.216	101969.	-5140.	13949.	-0.6	0.1077	263.
11:46:58	1.218	100622.	-5007.	13932.	-0.8	0.0555	262.
11:46:59	1.219	99273.	-4881.	13913.	-0.7	-.0140	262.
11:47:00	1.218	97923.	-4761.	13897.	-0.6	-.0397	262.

(CONTINUED)

F-111 AT 1.2M AT 14K MSL  
BOOM AT SITE 00 AT 1148 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:47:01	1.217	96575.	-4646.	13886.	-0.4	-.0289	262.
11:47:02	1.216	95226.	-4538.	13879.	-0.2	-.0180	261.
11:47:03	1.216	93878.	-4434.	13874.	-0.2	-.0127	261.
11:47:04	1.215	92530.	-4336.	13871.	-0.1	-.0080	261.
11:47:05	1.215	91182.	-4242.	13869.	-0.1	-.0143	261.
11:47:06	1.214	89834.	-4152.	13866.	-0.1	-.0361	261.
11:47:07	1.213	88487.	-4065.	13865.	-0.1	-.0534	261.
11:47:08	1.212	87141.	-3980.	13863.	0.0	-.0447	260.
11:47:09	1.210	85797.	-3896.	13864.	0.0	-.0383	260.
11:47:10	1.209	84454.	-3814.	13866.	0.1	-.0458	260.
11:47:11	1.208	83113.	-3734.	13871.	0.3	-.0596	260.
11:47:12	1.206	81773.	-3656.	13878.	0.4	-.0719	260.
11:47:13	1.204	80435.	-3580.	13888.	0.5	-.0710	260.
11:47:14	1.202	79100.	-3507.	13899.	0.4	-.0469	260.
11:47:15	1.201	77765.	-3435.	13908.	0.4	-.0142	260.
11:47:16	1.201	76432.	-3366.	13915.	0.3	0.0023	260.
11:47:17	1.201	75098.	-3298.	13921.	0.2	-.0020	260.
11:47:18	1.201	73764.	-3231.	13927.	0.2	-.0185	260.
11:47:19	1.200	72431.	-3167.	13932.	0.2	-.0204	260.
11:47:20	1.200	71098.	-3103.	13935.	0.1	0.0108	260.
11:47:21	1.201	69764.	-3041.	13936.	0.0	0.0635	259.
11:47:22	1.203	68429.	-2979.	13933.	-0.1	0.0897	259.
11:47:23	1.206	67091.	-2919.	13930.	-0.2	0.0733	259.
11:47:24	1.208	65750.	-2860.	13926.	-0.1	0.0537	259.
11:47:25	1.209	64408.	-2802.	13924.	-0.1	0.0231	259.
11:47:26	1.209	63065.	-2744.	13922.	-0.1	-.0128	259.
11:47:27	1.208	61722.	-2688.	13921.	0.0	-.0275	259.
11:47:28	1.207	60380.	-2632.	13920.	0.0	-.0184	259.
11:47:29	1.207	59039.	-2577.	13919.	0.0	-.0101	259.
11:47:30	1.207	57698.	-2522.	13918.	-0.1	-.0258	259.
11:47:31	1.206	56358.	-2468.	13916.	-0.1	-.0066	259.
11:47:32	1.207	55017.	-2414.	13914.	-0.1	0.0417	259.
11:47:33	1.208	53676.	-2360.	13912.	-0.1	0.0458	259.
11:47:34	1.209	52333.	-2307.	13910.	0.0	0.0174	259.
11:47:35	1.209	50990.	-2254.	13911.	0.1	0.0142	259.
11:47:36	1.210	49646.	-2201.	13913.	0.2	0.0250	259.
11:47:37	1.210	48301.	-2148.	13919.	0.3	0.0055	259.
11:47:38	1.210	46956.	-2095.	13927.	0.4	-.0010	259.
11:47:39	1.211	45612.	-2043.	13936.	0.4	0.0150	259.
11:47:40	1.211	44266.	-1992.	13944.	0.3	-.0195	259.
11:47:41	1.210	42921.	-1943.	13950.	0.2	-.0568	259.

(CONTINUED)

F-111 AT 1.2M AT 14K MSL  
BOOM AT SITE 00 AT 1148 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:47:42	1.208	41578.	-1895.	13954.	0.1	-.0359	259.
11:47:43	1.208	40236.	-1847.	13956.	0.1	0.0190	259.
11:47:44	1.209	38894.	-1798.	13957.	0.0	0.0533	259.
11:47:45	1.211	37550.	-1748.	13957.	0.0	0.0712	259.
11:47:46	1.213	36203.	-1697.	13958.	0.0	0.0464	259.
11:47:47	1.213	34856.	-1645.	13959.	0.0	-.0281	259.
11:47:48	1.211	33509.	-1592.	13957.	-0.1	-.0670	259.
11:47:49	1.210	32164.	-1539.	13953.	-0.3	-.0150	259.
11:47:50	1.210	30819.	-1486.	13945.	-0.4	0.0357	259.
11:47:51	1.211	29474.	-1434.	13936.	-0.4	0.0123	259.
11:47:52	1.211	28128.	-1381.	13926.	-0.4	-.0283	259.
11:47:53	1.210	26783.	-1327.	13918.	-0.2	-.0341	259.
11:47:54	1.209	25440.	-1272.	13915.	-0.1	-.0173	259.
11:47:55	1.209	24096.	-1217.	13915.	0.1	0.0078	259.
11:47:56	1.210	22753.	-1162.	13919.	0.2	0.0289	259.
11:47:57	1.210	21409.	-1107.	13924.	0.3	0.0024	259.
11:47:58	1.210	20064.	-1052.	13931.	0.3	-.0457	259.
11:47:59	1.208	18721.	-995.	13937.	0.3	-.0454	259.
11:48:00	1.207	17380.	-937.	13943.	0.2	0.0042	259.
11:48:01	1.208	16038.	-878.	13949.	0.2	0.0281	259.
11:48:02	1.209	14696.	-820.	13955.	0.3	0.0264	259.
11:48:03	1.209	13353.	-761.	13961.	0.3	0.0098	259.
11:48:04	1.209	12009.	-703.	13968.	0.3	-.0061	259.
11:48:05	1.209	10666.	-644.	13973.	0.2	-.0104	259.
11:48:06	1.209	9323.	-585.	13975.	0.0	-.0199	259.
11:48:07	1.208	7980.	-525.	13974.	-0.1	-.0414	259.
11:48:08	1.207	6639.	-465.	13969.	-0.2	-.0603	259.
11:48:09	1.205	5300.	-404.	13965.	-0.1	-.0581	259.
11:48:10	1.203	3963.	-343.	13966.	0.3	-.0308	259.
11:48:11	1.203	2627.	-281.	13979.	0.9	-.0185	259.
11:48:12	1.202	1292.	-220.	14011.	1.8	-.0381	259.
11:48:13	1.201	-42.	-158.	14065.	2.9	-.0720	259.
11:48:14	1.199	-1371.	-96.	14146.	4.1	-.0962	259.
11:48:15	1.196	-2696.	-34.	14253.	5.2	-.1262	260.
11:48:16	1.192	-4014.	29.	14385.	6.3	-.1706	260.
11:48:17	1.187	-5325.	94.	14540.	7.3	-.1958	260.
11:48:18	1.182	-6626.	161.	14715.	8.2	-.1816	260.
11:48:19	1.178	-7919.	232.	14907.	8.9	-.1746	260.
11:48:20	1.173	-9204.	306.	15115.	9.6	-.1863	260.
11:48:21	1.167	-10480.	386.	15336.	10.3	-.2132	261.
11:48:22	1.161	-11746.	470.	15573.	11.2	-.2591	261.

(CONTINUED)

F-111 AT 1.2M AT 14K MSL

(CONTINUED)

BOOM AT SITE 00 AT 1148 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
11:48:23	1.153	-13000.	558.	15828.	12.2	-.3059	261.
11:48:24	1.145	-14239.	651.	16104.	13.3	-.3262	261.
11:48:25	1.138	-15462.	747.	16402.	14.5	-.3216	262.
11:48:26	1.130	-16667.	847.	16725.	15.9	-.3484	262.
11:48:27	1.122	-17854.	951.	17074.	17.3	-.3942	262.
11:48:28	1.113	-19019.	1057.	17448.	18.7	-.4030	262.
11:48:29	1.106	-20162.	1167.	17848.	20.1	-.3875	263.
11:48:30	1.097	-21283.	1280.	18271.	21.4	-.3685	263.
11:48:31	1.089	-22383.	1395.	18714.	22.6	-.3534	263.
11:48:32	1.082	-23463.	1515.	19174.	23.6	-.3424	262.
11:48:33	1.075	-24526.	1640.	19647.	24.3	-.3460	264.
11:48:34	1.067	-25571.	1772.	20127.	24.8	-.3713	265.
11:48:35	1.057	-26601.	1913.	20610.	25.1	-.4159	265.
11:48:36	1.046	-27616.	2061.	21091.	25.2	-.4621	266.
11:48:37	1.031	-28618.	2215.	21563.	25.0	-.4937	266.
11:48:38	1.015	-29607.	2373.	22023.	24.5	-.5027	266.
11:48:39	0.998	-30587.	2532.	22465.	23.9	-.4940	266.
11:48:40	0.981	-31558.	2691.	22887.	23.2	-.4846	267.

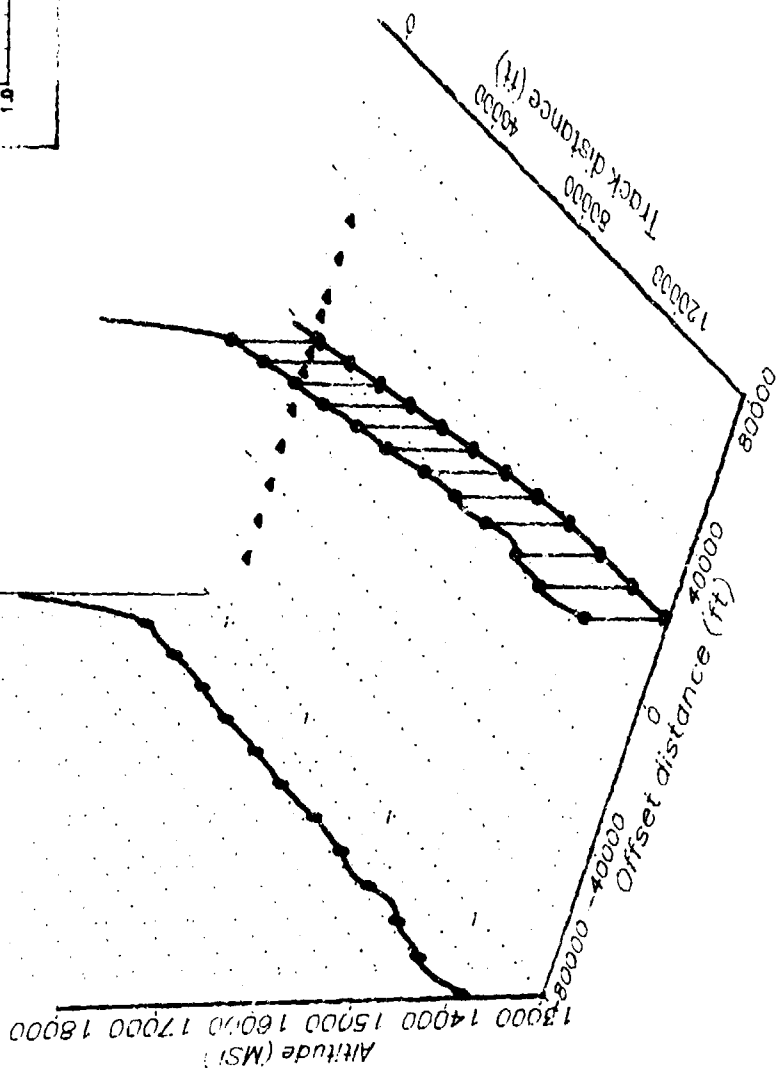
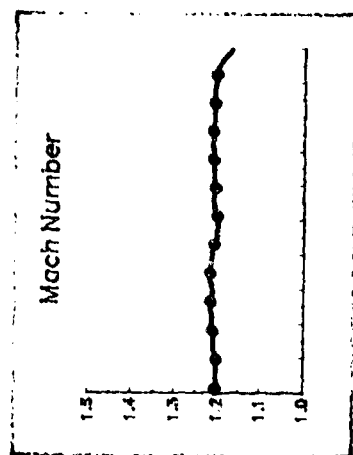


Figure B-38. F-111 on 6 Aug 87 at 1148



F-111 AT 1.4M AT 45K MSL

BOOM AT SITE 00 AT 1204 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:02:25	1.383	151710.	-5259.	40377.	6.2	0.1827	259.
12:02:26	1.389	150383.	-5196.	40523.	6.2	0.1800	260.
12:02:27	1.395	149052.	-5133.	40670.	6.2	0.1415	260.
12:02:28	1.399	147715.	-5069.	40818.	6.2	0.0417	260.
12:02:29	1.399	146378.	-5004.	40967.	6.3	-.0596	260.
12:02:30	1.397	145042.	-4937.	41118.	6.4	-.1088	260.
12:02:31	1.394	143711.	-4870.	41272.	6.6	-.0915	260.
12:02:32	1.392	142383.	-4802.	41430.	6.8	-.0557	260.
12:02:33	1.392	141057.	-4735.	41593.	7.0	-.0244	260.
12:02:34	1.392	139732.	-4669.	41760.	7.2	-.0144	260.
12:02:35	1.392	138409.	-4604.	41932.	7.4	-.0102	260.
12:02:36	1.394	137086.	-4540.	42108.	7.5	-.0186	260.
12:02:37	1.396	135765.	-4476.	42287.	7.6	-.0789	260.
12:02:38	1.395	134446.	-4412.	42468.	7.8	-.1955	260.
12:02:39	1.391	133134.	-4347.	42652.	7.8	-.2197	260.
12:02:40	1.390	131829.	-4280.	42836.	7.9	-.0551	260.
12:02:41	1.395	130525.	-4213.	43018.	7.7	0.1783	260.
12:02:42	1.406	129215.	-4146.	43198.	7.5	0.2616	260.
12:02:43	1.416	127898.	-4078.	43374.	7.3	0.1399	260.
12:02:44	1.421	126575.	-4010.	43547.	7.2	-.0595	260.
12:02:45	1.420	125253.	-3941.	43718.	7.1	-.1804	260.
12:02:46	1.416	123937.	-3870.	43887.	7.1	-.2060	260.
12:02:47	1.413	122628.	-3797.	44055.	7.1	-.1625	260.
12:02:48	1.409	121323.	-3723.	44221.	7.0	-.0823	260.
12:02:49	1.408	120021.	-3650.	44386.	6.9	-.0030	260.
12:02:50	1.409	118719.	-3576.	44546.	6.7	0.0647	260.
12:02:51	1.412	117413.	-3502.	44699.	6.3	0.1137	260.
12:02:52	1.417	116103.	-3429.	44841.	5.7	0.1239	260.
12:02:53	1.421	114787.	-3357.	44967.	4.9	0.0717	260.
12:02:54	1.422	113467.	-3285.	45074.	4.1	-.0230	260.
12:02:55	1.419	112146.	-3212.	45163.	3.3	.09 9	260.
12:02:56	1.416	110827.	-3139.	45231	2.7	-.0996	260.
12:02:57	1.413	109510.	-3065.	45282.	1.8	-.0338	260.
12:02:58	1.414	108193.	-2990.	45315.	1.1	0.0662	260.
12:02:59	1.417	106875.	-2916.	45334.	0.5	0.1491	260.
12:03:00	1.422	105551.	-2843.	45340.	0.0	0.1391	260.
12:03:01	1.426	104223.	-2772.	45336.	-0.3	0.0320	260.
12:03:02	1.425	102894.	-2701.	45325.	-0.5	-.0701	260.
12:03:03	1.422	101566.	-2630.	45311.	-0.7	-.0939	260.
12:03:04	1.419	100242.	-2559.	45294.	-0.8	-.0399	260.
12:03:05	1.419	98919.	-2488.	45274.	-0.9	0.0287	260.

(CONTINUED)

F-111 AT 1.4M AT 45K MSL  
BOOM AT SITE 00 AT 1204 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:03:06	1.421	97595.	-2419.	45253.	-0.9	0.0317	260.
12:03:07	1.421	96270.	-2349.	45230.	-1.0	-.0247	260.
12:03:08	1.419	94946.	-2281.	45207.	-1.0	-.0822	260.
12:03:09	1.416	93625.	-2212.	45183.	-1.0	-.0717	260.
12:03:10	1.415	92306.	-2144.	45159.	-1.0	-.0268	260.
12:03:11	1.414	90987.	-2075.	45137.	-0.9	-.0138	260.
12:03:12	1.413	89669.	-2005.	45116.	-0.9	-.0413	260.
12:03:13	1.412	88353.	-1936.	45097.	-0.8	-.0670	260.
12:03:14	1.409	87038.	-1866.	45080.	-0.7	-.0625	260.
12:03:15	1.408	85726.	-1798.	45065.	-0.6	-.0368	260.
12:03:16	1.407	84414.	-1732.	45053.	-0.5	-.0035	260.
12:03:17	1.407	83103.	-1669.	45041.	-0.5	0.0205	259.
12:03:18	1.408	81790.	-1609.	45031.	-0.4	0.0061	259.
12:03:19	1.408	80478.	-1552.	45022.	-0.4	-.0217	259.
12:03:20	1.407	79166.	-1499.	45015.	-0.3	-.0364	259.
12:03:21	1.406	77855.	-1448.	45009.	-0.2	-.0427	259.
12:03:22	1.404	76545.	-1400.	45007.	-0.1	-.0555	259.
12:03:23	1.402	75237.	-1354.	45006.	0.0	-.0538	259.
12:03:24	1.401	73931.	-1311.	45008.	0.1	0.0007	259.
12:03:25	1.402	72624.	-1270.	45010.	0.1	0.0725	258.
12:03:26	1.405	71315.	-1231.	45012.	0.1	0.0824	258.
12:03:27	1.407	70004.	-1195.	45014.	0.1	0.0260	258.
12:03:28	1.407	68691.	-1161.	45017.	0.2	-.0309	258.
12:03:29	1.406	67380.	-1129.	45023.	0.3	-.0474	258.
12:03:30	1.404	66070.	-1098.	45031.	0.4	-.0284	258.
12:03:31	1.404	64761.	-1068.	45041.	0.4	0.0009	258.
12:03:32	1.404	63452.	-1038.	45050.	0.3	0.0112	258.
12:03:33	1.404	62142.	-1008.	45056.	0.2	-.0190	258.
12:03:34	1.403	60834.	-979.	45060.	0.1	-.0375	258.
12:03:35	1.402	59526.	-949.	45053.	0.1	-.0056	258.
12:03:36	1.403	58218.	-920.	45064.	0.0	0.0470	258.
12:03:37	1.405	56909.	-892.	45065.	0.0	0.0655	258.
12:03:38	1.406	55598.	-865.	45064.	0.0	0.0364	258.
12:03:39	1.407	54286.	-839.	45063.	0.0	0.0010	258.
12:03:40	1.407	52973.	-814.	45062.	0.0	0.0026	258.
12:03:41	1.408	51661.	-790.	45063.	0.1	0.0201	258.
12:03:42	1.408	50348.	-768.	45066.	0.2	0.0329	258.
12:03:43	1.410	49034.	-746.	45071.	0.2	0.0363	258.
12:03:44	1.411	47718.	-726.	45076.	0.2	0.0394	258.
12:03:45	1.412	46402.	-707.	45082.	0.2	0.0444	258.
12:03:46	1.413	45084.	-688.	45087.	0.2	0.0267	257.

(CONTINUED)

F-111 AT 1.4M AT 45K MSL  
BOOM AT SITE 00 AT 1204 ON 06 AUG 87

(CONTINUED)

TIME LOCAL (HH-MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
12:03:47	1.414	43765.	-671.	45092.	0.2	-.0025	257.
12:03:48	1.413	42446.	-655.	45096.	0.2	-.0295	257.
12:03:49	1.412	41128.	-641.	45100.	0.1	-.0527	257.
12:03:50	1.410	39812.	-629.	45103.	0.1	-.0410	257.
12:03:51	1.410	38496.	-617.	45104.	0.1	0.0243	257.
12:03:52	1.412	37181.	-607.	45105.	0.0	0.1039	257.
12:03:53	1.416	35862.	-597.	45104.	0.0	0.1254	257.
12:03:54	1.420	34539.	-588.	45103.	-0.1	0.0998	257.
12:03:55	1.422	33213.	-579.	45102.	0.0	0.0352	257.
12:03:56	1.422	31885.	-571.	45103.	0.1	-.0336	257.
12:03:57	1.420	30559.	-562.	45108.	0.4	-.0955	257.
12:03:58	1.417	29236.	-555.	45122.	0.8	-.1109	257.
12:03:59	1.413	27916.	-548.	45146.	1.3	-.0944	257.
12:04:00	1.410	26600.	-541.	45182.	1.8	-.0844	257.
12:04:01	1.407	25287.	-534.	45232.	2.4	-.0815	257.
12:04:02	1.404	23977.	-528.	45294.	2.9	-.0805	257.
12:04:03	1.401	22670.	-521.	45367.	3.3	-.1166	257.
12:04:04	1.396	21368.	-514.	45447.	3.6	-.1535	257.
12:04:05	1.390	20070.	-506.	45534.	3.9	-.1570	257.
12:04:06	1.385	18778.	-497.	45625.	4.1	-.1443	257.
12:04:07	1.380	17491.	-487.	45721.	4.2	-.1593	257.
12:04:08	1.373	16210.	-475.	45820.	4.4	-.2003	257.
12:04:09	1.365	14935.	-461.	45923.	4.7	-.2395	257.
12:04:10	1.357	13668.	-443.	46031.	4.8	-.2432	258.
12:04:11	1.348	12409.	-423.	46141.	5.0	-.2192	258.
12:04:12	1.340	11158.	-398.	46255.	5.1	-.1826	258.
12:04:13	1.334	9912.	-371.	46370.	5.3	-.1713	258.
12:04:14	1.327	8673.	-339.	46489.	5.5	-.1915	258.
12:04:15	1.319	7440.	-302.	46612.	5.7	-.2133	259.
12:04:16	1.310	6215.	-261.	46739.	6.0	-.2443	259.
12:04:17	1.300	4998.	-213.	46870.	6.2	-.3015	259.
12:04:18	1.288	3792.	-158.	47006.	6.4	-.3374	260.
12:04:19	1.277	2597.	-96.	47144.	6.5	-.3077	260.
12:04:20	1.267	1412.	-25.	47284.	6.7	-.2302	261.
12:04:21	1.259	236.	56.	47423.	6.7	-.1684	261.
12:04:22	1.253	-934.	148.	47561.	6.6	-.1514	262.
12:04:23	1.247	-2099.	252.	47698.	6.6	-.1651	262.
12:04:24	1.240	-3256.	368.	47833.	6.6	-.2072	263.
12:04:25	1.231	-4406.	498.	47967.	6.6	-.2676	264.
12:04:26	1.222	-5546.	641.	48099.	6.5	-.2998	265.
12:04:27	1.212	-6675.	796.	48230.	6.5	-.2816	265.

(CONTINUED)

F-111 AT 1.4M AT 45K MSL

(CONTINUED)

BOOM AT SITE 00 AT 1204 ON 06 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. HEADING ACCEL T NORTH (G'S) (DEG)
12:04:28	1.204	-7792.	964.	48359.	6.4	-.2552 266.
12:04:29	1.196	-8900.	1144.	48485.	6.4	-.2410 267.
12:04:30	1.188	-9997.	1337.	48610.	6.3	-.2348 267.

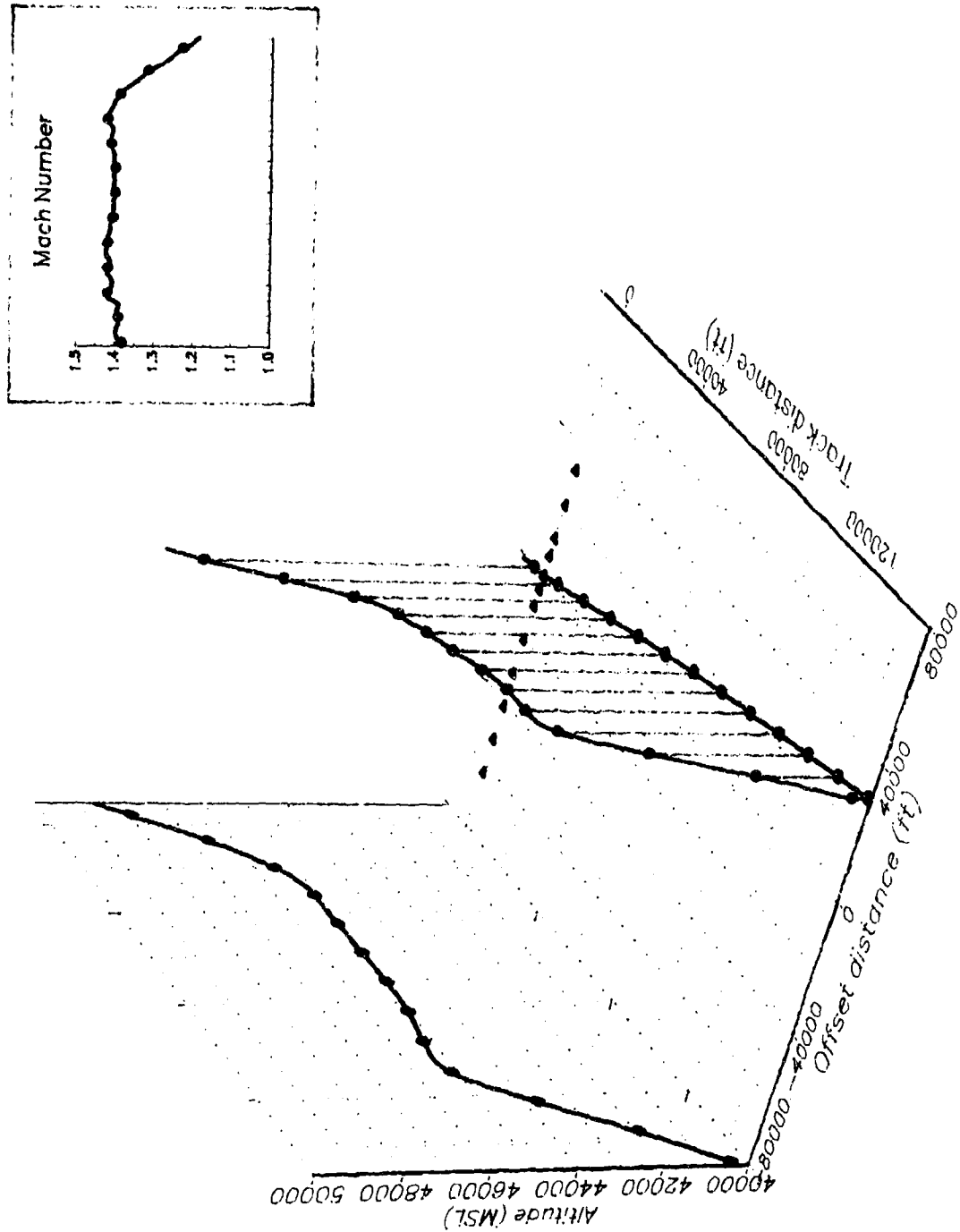


Figure B-39. F-111 on 6 Aug 87 at 1204

F-111 AT 1.25M AT 29.9K MSL  
BOOM AT SITE 00 AT 1050 ON 07 AUG 87

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:49:10	1.266	82325.	-2673.	29808.	0.3	0.0019	253.
10:49:11	1.266	81021.	-2751.	29814.	0.2	0.0023	253.
10:49:12	1.266	79716.	-2829.	29818.	0.1	0.0039	253.
10:49:13	1.267	78412.	-2907.	29820.	0.1	0.0107	253.
10:49:14	1.267	77107.	-2987.	29820.	0.0	0.0263	253.
10:49:15	1.268	75801.	-3067.	29819.	-0.1	0.0311	253.
10:49:16	1.269	74494.	-3149.	29816.	-0.2	0.0225	253.
10:49:17	1.269	73187.	-3232.	29812.	-0.2	0.0117	253.
10:49:18	1.269	71879.	-3315.	29807.	-0.2	-0.0205	253.
10:49:19	1.268	70573.	-3398.	29802.	-0.2	-0.0718	253.
10:49:20	1.265	69268.	-3480.	29799.	-0.1	-0.0998	253.
10:49:21	1.262	67966.	-3563.	29797.	-0.1	-0.0871	253.
10:49:22	1.260	66667.	-3645.	29795.	0.0	-0.0182	253.
10:49:23	1.261	65369.	-3727.	29794.	0.0	0.0879	253.
10:49:24	1.265	64068.	-3811.	29793.	-0.1	0.1585	253.
10:49:25	1.270	62762.	-3896.	29791.	-0.1	0.1404	253.
10:49:26	1.273	61452.	-3981.	29788.	-0.1	0.0582	253.
10:49:27	1.273	60140.	-4067.	29785.	-0.2	-0.0363	253.
10:49:28	1.271	58830.	-4153.	29781.	-0.2	-0.0985	253.
10:49:29	1.268	57522.	-4237.	29776.	-0.2	-0.0967	253.
10:49:30	1.266	56216.	-4322.	29770.	-0.3	-0.0457	253.
10:49:31	1.265	54913.	-4406.	29763.	-0.4	0.0204	253.
10:49:32	1.266	53609.	-4490.	29753.	-0.5	0.0656	253.
10:49:33	1.269	52303.	-4575.	29742.	-0.5	0.0812	253.
10:49:34	1.271	50994.	-4661.	29730.	-0.5	0.0799	253.
10:49:35	1.273	49683.	-4747.	29719.	-0.4	0.0629	253.
10:49:36	1.275	48370.	-4833.	29711.	-0.3	0.0245	253.
10:49:37	1.275	47056.	-4920.	29705.	-0.1	-0.0224	253.
10:49:38	1.273	45743.	-5006.	29704.	0.0	-0.0430	253.
10:49:39	1.272	44431.	-5092.	29706.	0.1	-0.0173	253.
10:49:40	1.273	43120.	-5179.	29709.	0.2	0.0274	253.
10:49:41	1.274	41808.	-5265.	29712.	0.1	0.0487	253.
10:49:42	1.275	40494.	-5352.	29715.	0.1	0.0438	253.
10:49:43	1.277	39179.	-5439.	29716.	0.0	0.0339	253.
10:49:44	1.278	37863.	-5525.	29716.	0.0	0.0242	253.
10:49:45	1.278	36546.	-5611.	29714.	-0.1	-0.0081	253.
10:49:46	1.277	35229.	-5698.	29712.	-0.1	-0.0531	253.
10:49:47	1.275	33914.	-5784.	29710.	-0.1	-0.0484	253.
10:49:48	1.274	32600.	-5871.	29710.	0.0	0.0104	253.
10:49:49	1.276	31286.	-5958.	29710.	0.0	0.0932	253.
10:49:50	1.280	29970.	-6048.	29711.	0.1	0.1418	253.

(CONTINUED)

F-111 AT 1.25M AT 29.9K MSL  
BOOM AT SITE 00 AT 1050 ON 07 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:49:51	1.284	28649.	-6140.	29712.	0.1	0.1006	252.
10:49:52	1.286	27325.	-6233.	29714.	0.1	0.0088	252.
10:49:53	1.284	26001.	-6326.	29717.	0.1	-.0855	252.
10:49:54	1.281	24680.	-6419.	29721.	0.2	-.1100	252.
10:49:55	1.279	23361.	-6512.	29724.	0.1	-.0501	252.
10:49:56	1.278	22045.	-6605.	29726.	0.0	0.0152	252.
10:49:57	1.279	20728.	-6699.	29725.	-0.1	0.0463	252.
10:49:58	1.281	19410.	-6794.	29723.	-0.2	0.0713	252.
10:49:59	1.283	18089.	-6891.	29718.	-0.2	0.0649	252.
10:50:00	1.284	16767.	-6988.	29714.	-0.2	-.0021	252.
10:50:01	1.283	15445.	-7085.	29711.	-0.1	-.0817	252.
10:50:02	1.280	14125.	-7183.	29709.	0.0	-.1161	252.
10:50:03	1.276	12809.	-7279.	29709.	0.0	-.1123	252.
10:50:04	1.273	11496.	-7374.	29709.	0.1	-.1294	252.
10:50:05	1.268	10188.	-7465.	29712.	0.1	-.1699	252.
10:50:06	1.262	8884.	-7553.	29716.	0.2	-.2216	253.
10:50:07	1.255	7587.	-7635.	29723.	0.4	-.2533	253.
10:50:08	1.247	6297.	-7708.	29734.	0.6	-.2774	253.
10:50:09	1.237	5016.	-7770.	29750.	0.8	-.3194	254.
10:50:10	1.227	3744.	-7816.	29770.	1.0	-.3625	255.
10:50:11	1.216	2483.	-7840.	29793.	1.1	-.3806	256.
10:50:12	1.204	1233.	-7837.	29819.	1.2	-.4045	258.
10:50:13	1.191	-3.	-7803.	29845.	1.2	-.4336	259.
10:50:14	1.178	-1223.	-7732.	29872.	1.2	-.4275	261.
10:50:15	1.165	-2428.	-7623.	29897.	1.2	-.4022	263.
10:50:16	1.153	-3615.	-7474.	29920.	1.0	-.3794	265.
10:50:17	1.142	-4783.	-7283.	29940.	0.9	-.3717	268.
10:50:18	1.130	-5931.	-7051.	29955.	0.7	-.3936	270.
10:50:19	1.117	-7056.	-6779.	29967.	0.5	-.4140	272.
10:50:20	1.105	-8156.	-6464.	29974.	0.3	-.4173	275.
10:50:21	1.092	-9228.	-6107.	29979.	0.1	-.4086	277.
10:50:22	1.079	-10269.	-5708.	29980.	-0.1	-.4033	280.
10:50:23	1.066	-11277.	-5268.	29976.	-0.3	-.4100	283.
10:50:24	1.053	-12251.	-4787.	29968.	-0.6	-.4217	286.
10:50:25	1.040	-13187.	-4268.	29952.	-1.0	-.4324	289.
10:50:26	1.026	-14082.	-3711.	29930.	-1.4	-.4323	291.
10:50:27	1.013	-14934.	-3119.	29900.	-1.8	-.4104	294.
10:50:28	1.000	-15743.	-2494.	29864.	-2.1	-.3564	297.
10:50:29	0.990	-16510.	-1839.	29823.	-2.4	-.2733	300.
10:50:30	0.982	-17240.	-1159.	29780.	-2.5	-.1883	302.
10:50:31	0.977	-17944.	-462.	29734.	-2.6	-.1261	304.

(CONTINUED)

F-111 AT 1.25M AT 29.9K MSL  
BOOM AT SITE 00 AT 1050 ON 07 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:50:32	0.973	-18629.	245.	29688.	-2.7	-.0927	305.
10:50:33	0.970	-19306.	955.	29640.	-2.7	-.0786	305.
10:50:34	0.967	-19982.	1664.	29592.	-2.8	-.0760	305.
10:50:35	0.965	-20658.	2368.	29544.	-2.7	-.0884	304.
10:50:36	0.961	-21337.	3067.	29497.	-2.7	-.1138	304.
10:50:37	0.957	-22018.	3760.	29451.	-2.6	-.1372	304.
10:50:38	0.953	-22698.	4447.	29406.	-2.6	-.1236	303.
10:50:39	0.949	-23379.	5129.	29362.	-2.5	-.0676	303.
10:50:40	0.948	-24060.	5808.	29319.	-2.5	-.0122	303.
10:50:41	0.948	-24742.	6486.	29276.	-2.5	0.0100	303.
10:50:42	0.948	-25426.	7161.	29234.	-2.5	-.0102	303.
10:50:43	0.947	-26113.	7835.	29192.	-2.4	-.0679	303.
10:50:44	0.943	-26799.	8505.	29151.	-2.4	-.1296	303.
10:50:45	0.939	-27486.	9170.	29110.	-2.4	-.1457	302.
10:50:46	0.935	-28171.	9830.	29070.	-2.3	-.1224	302.
10:50:47	0.931	-28856.	10485.	29031.	-2.3	-.0862	302.
10:50:48	0.929	-29540.	11137.	28993.	-2.2	-.0564	302.
10:50:49	0.927	-30224.	11787.	28956.	-2.2	-.0454	302.
10:50:50	0.926	-30908.	12436.	28921.	-2.0	-.0355	302.
10:50:51	0.925	-31591.	13083.	28888.	-1.9	-.0220	302.
10:50:52	0.924	-32274.	13729.	28857.	-1.7	-.0080	302.
10:50:53	0.924	-32958.	14375.	28830.	-1.6	0.0054	302.
10:50:54	0.924	-33642.	15021.	28805.	-1.4	0.0093	302.
10:50:55	0.924	-34327.	15666.	28781.	-1.4	-.0089	302.
10:50:56	0.923	-35012.	16311.	28758.	-1.4	-.0505	302.
10:50:57	0.920	-35697.	16954.	28735.	-1.4	-.0962	301.
10:50:58	0.917	-36380.	17594.	28712.	-1.5	-.1091	301.
10:50:59	0.914	-37062.	18231.	28687.	-1.5	-.0805	301.
10:51:00	0.912	-37743.	18865.	28661.	-1.6	-.0417	301.
10:51:01	0.911	-38423.	19498.	28635.	-1.6	-.0269	301.
10:51:02	0.910	-39104.	20129.	28609.	-1.6	-.0470	301.
10:51:03	0.908	-39785.	20758.	28582.	-1.6	-.0668	301.
10:51:04	0.906	-40466.	21385.	28554.	-1.7	-.0457	301.
10:51:05	0.905	-41146.	22009.	28527.	-1.7	0.0078	301.
10:51:06	0.906	-41828.	22633.	28500.	-1.7	0.0429	301.
10:51:07	0.907	-42512.	23257.	28472.	-1.7	0.0405	301.
10:51:08	0.908	-43198.	23879.	28444.	-1.7	0.0174	300.
10:51:09	0.908	-43887.	24501.	28415.	-1.8	-.0100	300.
10:51:10	0.907	-44577.	25120.	28385.	-1.8	-.0246	300.
10:51:11	0.907	-45267.	25738.	28355.	-1.8	-.0273	300.
10:51:12	0.906	-45958.	26354.	28326.	-1.7	-.0212	300.

(CONTINUED)



F-111 AT 1.25M AT 29.9K MSL  
BOOM AT SITE 00 AT 1050 ON 07 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:51:13	0.905	-46650.	26968.	28298.	-1.6	-.0180	300.
10:51:14	0.905	-47342.	27581.	28272.	-1.5	-.0280	300.
10:51:15	0.903	-48036.	28192.	28249.	-1.3	-.0510	300.
10:51:16	0.901	-48730.	28799.	28228.	-1.2	-.0753	299.
10:51:17	0.899	-49424.	29404.	28209.	-1.1	-.0870	299.
10:51:18	0.896	-50117.	30006.	28191.	-1.1	-.0742	299.
10:51:19	0.895	-50809.	30606.	28172.	-1.2	-.0387	299.
10:51:20	0.894	-51501.	31204.	28153.	-1.3	0.0074	299.
10:51:21	0.895	-52193.	31802.	28131.	-1.4	0.0399	299.
10:51:22	0.896	-52886.	32400.	28108.	-1.5	0.0406	299.
10:51:23	0.897	-53581.	32999.	28083.	-1.6	0.0229	299.
10:51:24	0.898	-54277.	33597.	28057.	-1.6	-.0031	299.
10:51:25	0.897	-54973.	34195.	28032.	-1.5	-.0476	299.
10:51:26	0.895	-55668.	34791.	28007.	-1.5	-.0890	299.
10:51:27	0.892	-56362.	35385.	27983.	-1.5	-.1048	299.
10:51:28	0.889	-57055.	35976.	27958.	-1.6	-.0905	299.
10:51:29	0.887	-57746.	36565.	27931.	-1.8	-.0528	299.
10:51:30	0.886	-58436.	37152.	27899.	-2.1	-.0045	299.
10:51:31	0.886	-59126.	37737.	27862.	-2.5	0.0297	299.
10:51:32	0.887	-59818.	38323.	27819.	-2.8	0.0252	299.
10:51:33	0.887	-60510.	38908.	27771.	-3.1	-.0046	298.
10:51:34	0.886	-61203.	39492.	27719.	-3.3	-.0207	298.
10:51:35	0.886	-61895.	40076.	27665.	-3.3	-.0182	298.
10:51:36	0.885	-62586.	40661.	27612.	-3.2	-.0159	299.
10:51:37	0.884	-63274.	41247.	27562.	-3.0	-.0263	299.
10:51:38	0.883	-63959.	41837.	27515.	-2.8	-.0447	299.
10:51:39	0.882	-64639.	42430.	27473.	-2.6	-.0535	300.
10:51:40	0.880	-65313.	43026.	27433.	-2.4	-.0562	300.
10:51:41	0.878	-65982.	43626.	27395.	-2.4	-.0579	300.
10:51:42	0.876	-66646.	44229.	27357.	-2.4	-.0572	301.
10:51:43	0.875	-67303.	44834.	27318.	-2.5	-.0548	301.
10:51:44	0.873	-67955.	45443.	27278.	-2.6	-.0384	302.
10:51:45	0.872	-68601.	46056.	27236.	-2.6	-.0081	302.
10:51:46	0.873	-69241.	46673.	27194.	-2.6	0.0102	303.
10:51:47	0.873	-69876.	47296.	27152.	-2.6	-.0043	303.
10:51:48	0.872	-70504.	47925.	27111.	-2.5	-.0438	304.
10:51:49	0.870	-71126.	48558.	27071.	-2.5	-.0757	304.
10:51:50	0.868	-71741.	49194.	27032.	-2.5	-.0782	304.
10:51:51	0.866	-72350.	49832.	26993.	-2.5	-.0575	305.
10:51:52	0.864	-72954.	50472.	26952.	-2.6	-.0331	305.
10:51:53	0.863	-73552.	51115.	26909.	-2.9	-.0193	306.

(CONTINUED)

F-111 AT 1.25M AT 29.9K MSL  
BOOM AT SITE 00 AT 1050 ON 07 AUG 87

(CONTINUED)

TIME LOCAL (HH:MM:SS)	MACH #	X-POS (FT)	Y-POS (FT)	ALT. (FT MSL)	CLIMB ANGLE (DEG)	TANJ. ACCEL (G'S)	HEADING T NORTH (DEG)
10:51:54	0.863	-74145.	51761.	26862.	-3.1	0.0001	306.
10:51:55	0.863	-74733.	52411.	26810.	-3.4	0.0178	306.
10:51:56	0.863	-75316.	53066.	26755.	-3.6	0.0156	307.
10:51:57	0.863	-75895.	53724.	26696.	-3.9	0.0120	307.
10:51:58	0.863	-76470.	54384.	26633.	-4.0	0.0160	307.
10:51:59	0.863	-77043.	55048.	26568.	-4.2	0.0235	308.
10:52:00	0.864	-77614.	55713.	26500.	-4.4	0.0258	308.

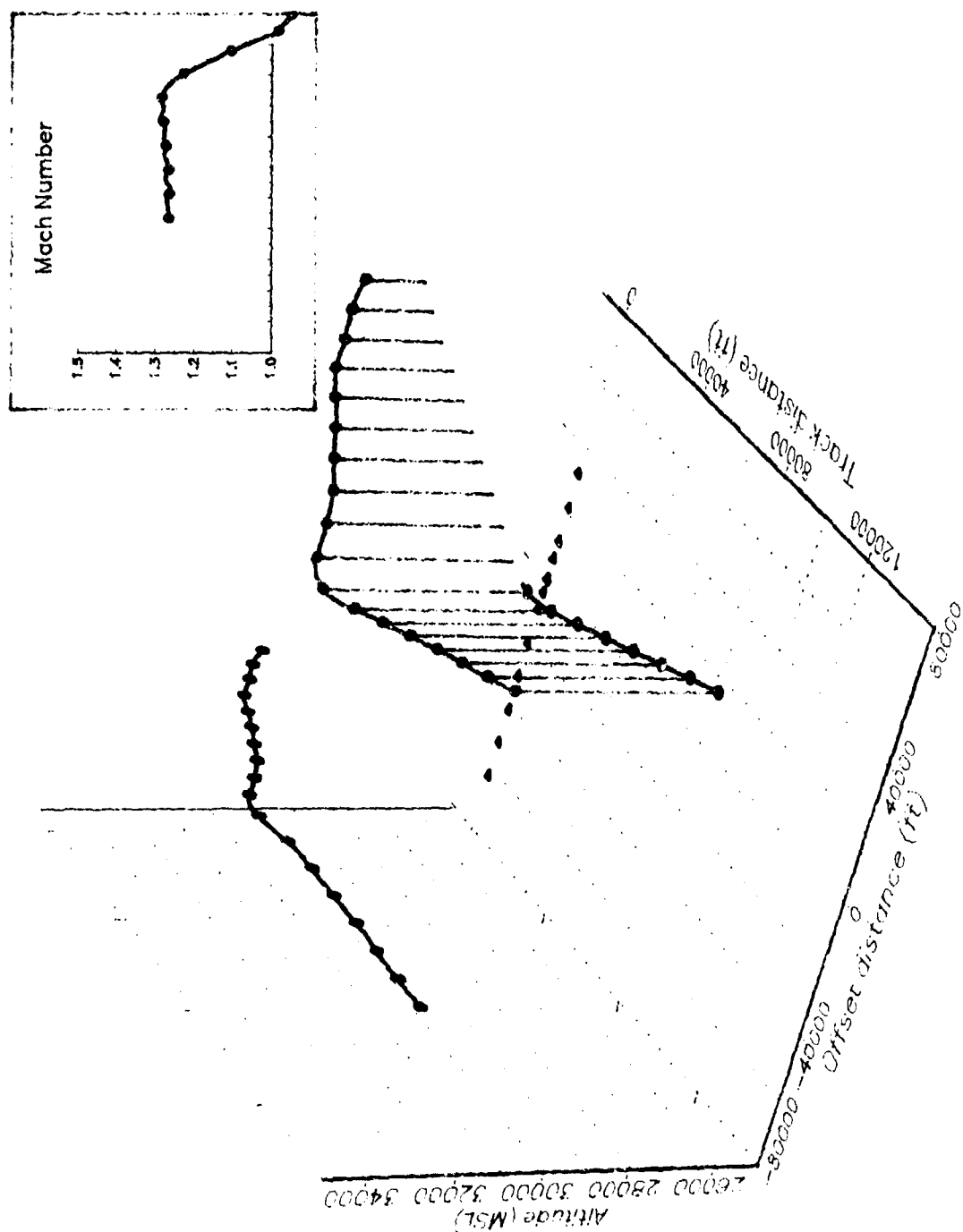


Figure B-40. F-111 on 7 Aug 87 at 1050

# APPENDIX C: WEATHER DATA

3 AUG 87

0952 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1936	27.7	4.7	23	210	10	677
3000	1895	28.7	3.4	19	255	14	678
4000	1831	27.7	2.1	19	274	11	677
5000	1769	26.9	1.4	19	265	4	676
6000	1709	25.4	0.8	19	266	4	674
7000	1650	22.9	1.1	23	264	5	671
8000	1593	20.3	1.1	27	242	5	668
9000	1538	17.6	0.2	30	190	4	665
10000	1484	15.2	0.4	36	144	8	663
11000	1431	12.8	1.7	46	126	14	660
12000	1380	10.0	1.0	53	118	16	657
13000	1330	7.4	0.7	62	120	14	654
14000	1282	5.0	0.1	70	133	10	651
15000	1235	2.5	-1.5	75	152	7	648
16000	1189	-0.2	-1.9	87	155	6	645
17000	1145	-2.3	-3.1	94	146	5	642
18000	1102	-4.0	-5.8	87	133	5	640
19000	1060	-6.5	-7.7	91	117	4	637
20000	1019	-7.8	-10.8	80	146	4	635
21000	980	-9.0	-19.3	44	165	3	633
22000	942	-9.8	-23.3	27	217	3	632
23000	906	-11.5	-28.0	24	259	7	630
24000	871	-14.2	-30.1	24	260	10	627
25000	836	-16.8	-32.4	24	265	12	624
26000	803	-19.5	-34.1	25	260	12	620
27000	771	-20.6	-35.4	24	250	12	619
28000	739	-22.9	-37.5	24	251	15	616
29000	709	-25.2	-39.3	25	254	16	613
30000	680	-26.6	-40.5	25	257	16	612
31000	652	-29.1	-42.7	25	257	17	608
32000	625	-31.5	-44.6	25	257	18	606
33000	598	-33.4	-46.2	26	251	19	603
34000	573	-35.6	-48.0	26	248	21	600
35000	548	-37.5	-49.6	26	250	24	598
36000	525	-39.5	-51.3	26	249	28	595
37000	502	-41.9	-53.4	27	248	29	592
38000	480	-44.3	-55.4	27	249	29	589
39000	458	-46.5	-57.3	27	249	28	586
40000	438	-49.1	-59.5	27	250	27	583
41000	418	-51.6	-61.6	28	252	26	580
42000	399	-54.0	-63.7	28	251	25	577
43000	380	-56.3	-65.7	28	244	26	574
44000	362	-58.2	-67.4	29	240	27	571
45000	345	-59.9	99.9	999	242	27	569

(CONTINUED)

3 AUG 87

0952 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
46000	329	-61.8	99.9	999	250	27	566
47000	313	-64.1	99.9	999	256	26	563
48000	298	-65.7	99.9	999	255	24	561
49000	283	-66.9	99.9	999	249	24	559
50000	269	-68.2	99.9	999	249	22	558
51000	256	-69.4	99.9	999	252	17	556
52000	243	-68.9	99.9	999	259	14	557
53000	231	-68.2	99.9	999	264	11	558
54000	220	-68.9	99.9	999	257	11	557
55000	209	-69.4	99.9	999	258	12	556
56000	199	-68.0	99.9	999	287	9	558
57000	189	-68.1	99.9	999	31	6	558
58000	179	-67.3	99.9	999	122	10	559
59000	171	-67.5	99.9	999	155	13	559
60000	162	-67.0	99.9	999	179	10	559
61000	154	-55.9	99.9	999	194	6	561
62000	147	-64.9	99.9	999	176	3	562
63000	140	-64.7	99.9	999	104	8	562
64000	133	-63.4	99.9	999	101	11	564
65000	127	-61.2	99.9	999	97	9	567
66000	120	-60.0	99.9	999	84	9	569
67000	115	-59.7	99.9	999	74	10	569
68000	109	-59.0	99.9	999	75	12	570
69000	104	-56.6	99.9	999	78	16	573
70000	99	-56.7	99.9	999	72	18	573
71000	95	-56.4	99.9	999	66	18	573
72000	90	-55.7	99.9	999	65	18	574
73000	86	-54.9	99.9	999	70	20	575
74000	82	-54.8	99.9	999	75	20	576
75000	78	-54.9	99.9	999	85	17	575
76000	75	-54.8	99.9	999	102	21	576
77000	71	-54.9	99.9	999	104	22	575
78000	68	-54.4	99.9	999	96	20	576
79000	65	-53.0	99.9	999	74	16	578
80000	62	-51.7	99.9	999	82	16	580
81000	59	-50.9	99.9	999	83	19	581
82000	56	-50.8	99.9	999	78	20	581
83000	54	-50.9	99.9	999	71	20	581
84000	51	-50.5	99.9	999	82	22	581
85000	49	-49.5	99.9	999	86	29	582
86000	47	-48.5	99.9	999	89	30	584
87000	45	-47.1	99.9	999	89	29	586
88000	43	-45.5	99.9	999	88	28	588
89000	41	-45.4	99.9	999	92	29	588
90000	39	-45.2	99.9	999	96	30	588
91000	37	-45.1	99.9	999	97	30	588
92000	35	-45.5	99.9	999	89	27	588

(CONTINUED)

3 AUG 87

0952 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KFS)	SOUND SPEED (KTS)
93000	34	-46.4	99.9	999	85	25	587
94000	32	-47.0	99.9	999	86	26	586
95000	31	-46.3	99.9	999	89	30	587
96000	29	-45.8	99.9	999	88	30	587
97000	28	-45.5	99.9	999	84	28	588
98000	27	-44.8	99.9	999	83	26	589
99000	26	-43.7	99.9	999	84	26	590
100000	25	-41.6	99.	999	87	31	593
101000	23	-41.3	99.9	999	88	35	593
102000	22	-40.9	99.9	999	88	37	594
103000	21	-40.2	99.9	999	91	37	594
104000	20	-40.0	99.9	999	92	35	595
105000	20	-40.6	99.9	999	90	32	594
106000	19	-40.0	99.9	999	86	34	595
107000	18	-39.2	99.9	999	999	999	596
108000	17	-38.6	99.9	999	999	999	596

3 AUG 87

1430 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1940	26.2	4.6	25	200	8	675
3000	1898	27.8	4.8	23	207	6	677
4000	1834	27.9	3.6	21	198	3	677
5000	1772	26.4	2.9	21	294	0	675
6000	1711	25.1	2.7	23	275	0	674
7000	1653	22.8	2.4	26	345	0	671
8000	1596	20.7	3.4	32	161	2	669
9000	1540	17.5	5.8	46	142	6	666
10000	1486	15.3	5.4	51	132	10	663
11000	1434	13.0	3.9	54	124	13	660
12000	1382	10.3	2.5	58	117	14	657
13000	1333	7.9	0.8	60	116	13	654
14000	1284	5.4	-0.6	65	118	12	651
15000	1237	2.4	-0.5	81	124	11	648
16000	1191	-0.2	-1.3	92	120	13	645
17000	1147	-2.7	-3.6	93	108	12	642
18000	1104	-4.0	-7.1	79	126	5	640
19000	1062	-6.6	-7.9	90	142	6	637
20000	1021	-6.8	-15.8	49	142	5	636
21000	982	-7.3	-22.5	28	131	4	635
22000	945	-9.3	-24.5	27	165	3	633
23000	908	-11.5	-26.4	27	219	4	630
24000	872	-14.2	-28.4	28	239	6	627
25000	838	-17.0	-30.8	28	257	8	624
26000	805	-19.6	-32.8	29	271	10	620
27000	772	-21.9	-34.9	29	280	12	617
28000	741	-23.6	-36.4	29	278	11	615
29000	711	-25.4	-37.9	29	274	12	613
30000	681	-26.8	-39.2	29	276	15	611
31000	653	-28.4	-40.5	29	275	16	609
32000	626	-30.8	-42.5	30	251	18	606
33000	600	-33.8	-45.0	31	262	19	603
34000	574	-34.7	-45.6	31	288	19	601
35000	550	-36.7	-47.4	31	273	20	599
36000	526	-38.9	-49.3	32	253	24	596
37000	503	-41.3	-51.3	32	249	25	593
38000	481	-43.7	-53.4	32	248	25	590
39000	459	-46.4	-55.7	33	247	24	587
40000	439	-49.1	-58.0	33	248	23	583
41000	419	-51.5	-60.1	34	250	22	580
42000	400	-53.8	-62.1	34	245	23	577
43000	381	-56.1	-64.1	35	244	26	574
44000	363	-58.4	-66.0	36	253	27	571
45000	346	-60.1	99.9	999	263	26	568
46000	330	-61.5	99.9	999	267	26	567
47000	314	-63.4	99.9	999	271	26	564
48000	298	-65.4	99.9	999	275	25	561

(CONTINUED)

3 AUG 87

1430 ZULU

(CONTINUED)

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
49000	284	-66.9	99.9	999	275	25	559
50000	270	-68.0	99.9	999	274	22	558
51000	257	-68.9	99.9	999	274	17	557
52000	244	-68.8	99.9	999	280	13	557
53000	232	-67.9	99.9	999	286	6	558
54000	220	-68.9	99.9	999	230	3	557
55000	209	-70.6	99.9	999	261	5	554
56000	199	-69.2	99.9	999	206	1	556
57000	189	-70.0	99.9	999	168	6	555
58000	180	-68.0	99.9	999	205	5	558
59000	171	-65.4	99.9	999	324	4	561
60000	163	-64.7	99.9	999	23	9	562
61000	155	-64.7	99.9	999	58	12	562
62000	147	-64.6	99.9	999	999	999	563



3 AUG 87

1724 ZULU

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
2372	1940	36.8	5.9	15	130	4	687
3000	1899	32.4	3.5	16	159	2	682
4000	1836	29.1	2.0	17	160	0	678
5000	1774	26.5	1.2	19	154	0	675
6000	1713	25.5	0.7	19	174	2	674
7000	1655	23.8	1.8	23	124	5	672
8000	1598	20.2	5.8	39	123	6	669
9000	1542	17.1	6.2	48	124	6	665
10000	1488	14.9	5.0	51	103	6	663
11000	1435	12.7	4.0	55	98	8	660
12000	1384	10.2	3.4	62	101	10	657
13000	1334	7.8	3.0	71	102	13	654
14000	1286	5.9	1.5	73	125	11	652
15000	1239	3.1	-1.6	71	134	11	649
16000	1193	0.4	-3.5	74	114	13	645
17000	1148	-2.2	-5.3	79	104	13	642
18000	1105	-4.3	-5.4	92	122	7	640
19000	1063	-6.0	-7.1	92	167	7	637
20000	1023	-6.5	-13.5	57	194	8	637
21000	984	-7.5	-23.4	27	200	9	635
22000	946	-9.0	-26.5	22	205	6	633
23000	909	-11.8	-28.4	23	211	5	630
24000	874	-14.4	-30.6	23	229	6	627
25000	839	-17.2	-32.6	24	249	8	623
26000	806	-19.2	-34.5	24	261	5	621
27000	773	-21.1	-36.1	24	272	3	618
28000	742	-23.5	-37.9	24	246	5	616
29000	712	-25.6	-39.6	25	237	6	613
30000	682	-27.2	-41.1	25	246	6	611
31000	654	-29.1	-45.3	19	264	8	609
32000	627	-31.2	-44.3	26	265	11	606
33000	600	-33.2	-45.8	26	257	14	603
34000	575	-35.1	-47.3	27	254	18	601
35000	550	-37.3	-49.2	27	253	22	598
36000	526	-39.0	-50.6	27	257	22	596
37000	504	-41.4	-52.5	28	256	22	593
38000	481	-44.0	-54.7	29	254	24	590
39000	460	-46.6	-56.8	29	256	24	586
40000	439	-49.1	-58.8	30	257	23	583
41000	419	-51.4	-60.8	30	254	22	580
42000	400	-53.6	-62.7	31	248	23	577
43000	381	-55.9	-64.6	32	247	26	574
44000	364	-58.2	-66.6	32	253	26	571
45000	346	-60.0	99.9	999	264	25	569
46000	330	-61.3	99.9	999	273	25	567
47000	314	-62.8	99.9	999	280	25	565
48000	299	-64.7	99.9	999	287	27	562

(CONTINUED)

3 AUG 87 1724 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
49000	284	-66.1	99.9	999	290	26	560
50000	270	-66.6	99.9	999	291	22	560
51000	257	-66.6	99.9	999	292	14	560
52000	245	-66.6	99.9	999	273	4	560
53000	233	-66.8	99.9	999	172	8	559
54000	221	-68.7	99.9	999	173	13	557
55000	210	-70.3	99.9	999	183	7	555
56000	200	-70.8	99.9	999	174	1	554
57000	190	-70.3	99.9	999	211	3	555
58000	180	-68.4	99.9	999	242	3	557
59000	171	-66.2	99.9	999	10	1	560
60000	163	-64.8	99.9	999	66	8	562
61000	155	-64.2	99.9	999	86	12	563
62000	148	-62.3	99.9	999	103	16	566
63000	141	-61.5	99.9	999	106	17	567
64000	134	-61.7	99.9	999	101	16	566
65000	128	-61.8	99.9	999	96	14	566
66000	121	-61.2	99.9	999	101	15	567
67000	116	-59.4	99.9	999	103	18	569
68000	110	-58.1	99.9	999	112	18	571
69000	105	-57.1	99.9	999	116	15	572
70000	100	-56.8	99.9	999	104	11	573
71000	95	-56.7	99.9	999	79	10	573
72000	91	-56.1	99.9	999	86	10	574
73000	87	-54.9	99.9	999	82	15	575
74000	83	-53.2	99.9	999	76	16	578
75000	79	-51.8	99.9	999	69	17	579
76000	75	-52.3	99.9	999	66	18	579
77000	72	-52.5	99.9	999	78	23	579
78000	68	-52.7	99.9	999	88	27	578
79000	65	-52.9	99.9	999	96	29	578
80000	62	-53.4	99.9	999	93	28	577
81000	59	-52.7	99.9	999	94	28	578
82000	57	-51.2	99.9	999	97	30	580
83000	54	-50.7	99.9	999	109	30	581
84000	52	-49.7	99.9	999	114	27	582
85000	49	-48.6	99.9	999	111	21	584
86000	47	-47.8	99.9	999	99	17	585
87000	45	-47.6	99.9	999	87	19	585
88000	43	-47.6	99.9	999	999	999	585
89000	41	-46.7	99.9	999	999	999	586

4 AUG 87 0952 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1938	25.8	5.9	28	340	4	675
3000	1897	29.9	5.3	21	330	6	679
4000	1833	30.8	4.9	19	341	5	680
5000	1772	29.0	4.0	20	313	5	678
6000	1712	26.7	3.6	22	297	3	676
7000	1653	24.7	3.7	25	305	2	674
8000	1597	21.7	3.0	29	315	1	670
9000	1541	18.7	4.5	39	105	0	667
10000	1487	16.1	4.3	45	99	5	664
11000	1435	13.8	0.4	39	89	11	661
12000	1384	11.3	-2.0	39	80	14	658
13000	1334	8.7	-3.0	43	77	16	655
14000	1286	6.3	-5.8	41	85	18	652
15000	1239	3.7	-7.2	44	93	20	649
16000	1193	1.2	-9.2	45	91	20	646
17000	1149	-1.1	-11.5	45	88	15	643
18000	1105	-3.3	-15.1	39	95	8	640
19000	1064	-5.9	-16.9	41	125	4	637
20000	1023	-8.1	-27.3	20	222	1	634
21000	984	-8.4	-30.3	15	292	4	634
22000	946	-10.5	-32.0	15	298	8	631
23000	909	-12.7	-33.8	15	301	11	629
24000	873	-14.6	-35.3	15	297	10	626
25000	839	-16.2	-36.7	15	294	7	624
26000	805	-17.9	-38.1	15	298	5	622
27000	773	-19.9	-39.7	15	270	5	620
28000	742	-21.9	-41.3	15	277	6	617
29000	712	-23.3	-42.4	15	277	9	616
30000	683	-25.1	-43.9	15	276	11	613
31000	655	-26.8	-45.3	15	287	12	611
32000	628	-29.3	-47.2	15	285	11	608
33000	601	-31.5	-49.1	15	272	10	605
34000	576	-33.8	-50.9	15	278	12	603
35000	551	-36.4	-53.0	16	281	11	599
36000	528	-38.7	-54.8	16	276	9	596
37000	505	-41.3	-56.9	16	259	7	593
38000	483	-44.2	-59.3	16	251	7	589
39000	461	-47.0	-61.6	16	232	6	586
40000	440	-49.5	-63.6	17	238	8	583
41000	420	-52.7	-66.3	17	250	7	578
42000	401	-54.6	-67.7	17	237	7	576
43000	382	-57.0	-69.7	17	240	7	573
44000	364	-59.0	99.9	999	278	7	570
45000	347	-61.0	99.9	999	297	10	567
46000	330	-63.4	99.9	999	301	13	564
47000	314	-64.7	99.9	999	309	17	562
48000	299	-65.5	99.9	999	318	18	561

(CONTINUED)

4 AUG 87

0952 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
49000	284	-67.2	99.9	999	320	18	559
50000	270	-69.0	99.9	999	313	18	557
51000	257	-70.2	99.9	999	302	16	555
52000	244	-70.8	99.9	999	305	13	554
53000	232	-70.1	99.9	999	329	8	555
54000	220	-69.6	99.9	999	5	5	556
55000	209	-70.0	99.9	999	38	4	555
56000	199	-71.5	99.9	999	35	4	553
57000	189	-69.3	99.9	999	51	6	556
58000	180	-68.7	99.9	999	71	7	557
59000	171	-67.7	99.9	999	35	2	558
60000	162	-67.7	99.9	999	322	4	558
61000	154	-66.4	99.9	999	1	4	560
62000	147	-64.4	99.9	999	49	7	563
63000	140	-62.4	99.9	999	64	11	565
64000	133	-60.7	99.9	999	77	15	568
65000	127	-60.6	99.9	999	90	19	568
66000	121	-61.3	99.9	999	98	19	567
67000	115	-60.8	99.9	999	94	18	568
68000	110	-59.9	99.9	999	83	19	569
69000	104	-59.4	99.9	999	78	21	569
70000	99	-59.1	99.9	999	82	21	570
71000	95	-58.2	99.9	999	77	15	571
72000	90	-57.8	99.9	999	53	12	572
73000	86	-55.9	99.9	999	59	14	574
74000	82	-53.9	99.9	999	67	16	577
75000	78	-52.4	99.9	999	70	17	579
76000	75	-52.2	99.9	999	69	19	579
77000	71	-52.4	99.9	999	82	20	579
78000	68	-52.6	99.9	999	97	19	578
79000	65	-52.4	99.9	999	115	17	579
80000	62	-53.0	99.9	999	92	18	578
81000	59	-53.4	99.9	999	73	26	577
82000	56	-52.0	99.9	999	76	37	579
83000	54	-51.3	99.9	999	89	32	580
84000	51	-49.7	99.9	999	91	28	582
85000	49	-48.5	99.9	999	89	27	584
86000	47	-48.5	99.9	999	91	31	584
87000	45	-48.4	99.9	999	88	32	584
88000	43	-47.4	99.9	999	90	31	585
89000	41	-46.1	99.9	999	97	28	587
90000	39	-46.2	99.9	999	104	25	587
91000	37	-46.7	99.9	999	102	22	586
92000	35	-47.5	99.9	999	93	21	585
93000	34	-47.0	99.9	999	87	18	586
94000	32	-46.5	99.9	999	76	17	586
95000	31	-46.0	99.9	999	65	19	587

(CONTINUED)

4 AUG 87

0952 ZULU

(CONTINUED)

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
96000	29	-44.8	99.9	999	61	25	589
97000	28	-43.1	99.9	999	61	32	591
98000	27	-42.0	99.9	999	66	32	592
99000	26	-40.9	99.9	999	73	35	594
100000	25	-39.8	99.9	999	82	40	595
101000	23	-38.6	99.9	999	88	47	597
102000	22	-39.0	99.9	999	999	999	596
103000	21	-38.9	99.9	999	999	999	596

4 AUG 87 1633 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1941	33.4	8.1	21	0	0	684
3000	1900	31.1	8.6	24	90	2	681
4000	1837	29.7	9.0	27	70	3	680
5000	1775	27.5	7.2	27	62	2	677
6000	1715	25.6	6.6	29	69	1	675
7000	1656	24.2	6.3	31	86	3	673
8000	1599	22.0	6.2	35	85	7	671
9000	1544	19.1	5.5	40	87	6	667
10000	1490	16.1	4.5	46	98	5	664
11000	1437	13.5	3.4	50	96	5	661
12000	1386	11.0	2.2	54	90	7	658
13000	1336	8.1	1.8	65	100	9	655
14000	1288	5.6	0.7	70	113	12	652
15000	1241	3.3	-0.2	77	124	14	649
16000	1195	0.7	-3.0	76	124	13	646
17000	1150	-1.4	-5.6	73	124	11	643
18000	1107	-3.2	-13.2	45	125	5	640
19000	1065	-6.1	-14.8	49	127	5	637
20000	1025	-7.3	-22.0	29	27	5	635
21000	985	-7.8	-26.2	21	11	7	635
22000	947	-10.0	-27.9	21	0	8	632
23000	911	-11.6	-29.4	21	1	6	630
24000	875	-13.7	-31.0	21	10	3	628
25000	841	-15.7	-32.7	21	331	1	625
26000	807	-17.6	-34.2	21	323	2	623
27000	775	-19.2	-35.5	21	338	3	621
28000	744	-20.5	-36.3	22	335	3	619
29000	714	-21.9	-36.5	24	316	3	618
30000	685	-24.0	-38.6	24	312	4	615
31000	657	-25.7	-40.8	22	316	5	613
32000	630	-28.2	-42.9	22	325	6	610
33000	604	-30.4	-44.6	23	326	8	607
34000	578	-33.2	-46.4	24	316	8	603
35000	554	-36.2	-49.0	24	304	9	600
36000	530	-38.8	-51.1	25	300	9	596
37000	507	-41.3	-53.1	26	300	7	593
38000	484	-44.0	-55.2	27	276	5	590
39000	463	-46.5	-57.3	27	999	999	586

4 AUG 87

2133 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1938	41.8	9.9	15	90	5	693
3000	1898	37.8	7.2	15	109	3	688
4000	1836	33.7	4.8	16	18	4	684
4100	1829	33.4	4.6	16	27	6	684
4200	1823	33.1	4.5	16	32	7	683
4300	1817	32.8	4.3	16	34	6	683
4400	1811	32.5	4.2	16	57	5	682
4500	1805	32.2	4.0	17	25	3	682
4600	1799	31.8	3.8	17	329	1	682
4700	1793	31.5	3.7	17	52	2	681
4800	1787	31.2	3.5	17	56	4	681
4900	1781	30.9	3.4	17	77	3	680
5000	1774	30.6	3.2	17	166	2	680
5100	1768	30.3	3.1	17	120	3	680
5200	1762	30.0	3.0	17	135	2	679
5300	1756	29.7	2.9	18	66	1	679
5400	1750	29.4	2.8	18	83	3	679
5500	1745	29.1	2.7	18	133	3	679
5600	1739	28.7	2.5	18	77	4	678
5700	1733	28.4	2.4	18	129	1	678
5800	1727	28.1	2.3	19	135	2	678
5900	1721	27.8	2.2	19	57	4	677
6000	1715	27.5	2.1	19	143	1	677
6100	1709	27.2	2.1	19	161	3	677
6200	1703	27.0	2.1	20	109	3	676
6300	1697	26.7	2.1	20	192	2	676
6400	1691	26.5	2.1	20	189	3	676
6500	1685	26.2	2.2	21	147	2	676
6600	1680	25.9	2.2	21	176	5	675
6700	1674	25.7	2.2	21	175	4	675
6800	1668	25.4	2.2	21	192	6	675
6900	1662	25.2	2.2	22	171	4	674
7000	1656	24.9	2.2	22	160	5	674
7100	1651	24.6	2.3	23	147	5	674
7200	1645	24.3	2.4	23	157	6	673
7300	1639	24.0	2.5	24	175	6	673
7400	1634	23.7	2.6	24	150	4	672
7500	1628	23.5	2.7	25	114	4	672
7600	1622	23.2	2.7	26	128	6	672
7700	1617	22.9	2.8	26	113	7	671
7800	1611	22.6	2.9	27	126	6	671
7900	1605	22.3	3.0	27	113	5	670
8000	1599	22.0	3.1	28	129	5	670
8100	1594	21.7	3.1	29	131	5	670
8200	1588	21.4	3.1	29	104	5	669
8300	1583	21.0	3.1	30	129	5	669
8400	1577	20.7	3.1	31	102	5	669

(CONTINUED)

4 AUG 87

2133 ZULU

(CONTINUED)

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
8500	1572	20.4	3.1	32	111	3	669
8600	1566	20.1	3.1	32	130	4	668
8700	1561	19.8	3.1	33	109	4	668
8800	1555	19.4	3.1	34	136	4	668
8900	1550	19.1	3.1	34	143	4	667
9000	1544	18.8	3.1	35	124	5	667
9100	1539	18.5	3.3	36	135	4	667
9200	1533	18.2	3.5	38	146	5	666
9300	1528	17.9	3.6	39	142	5	666
9400	1522	17.6	3.8	40	143	5	666
9500	1517	17.4	4.0	42	153	5	666
9600	1512	17.1	4.2	43	145	5	665
9700	1506	16.8	4.4	44	125	5	665
9800	1501	16.5	4.5	45	147	5	665
9900	1495	16.2	4.7	47	157	6	664
10000	1490	15.9	4.9	48	130	5	664
10100	1485	15.6	4.8	49	151	6	664
10200	1479	15.4	4.8	49	161	7	663
10300	1474	15.1	4.7	50	135	5	663
10400	1469	14.9	4.7	50	140	6	663
10500	1464	14.6	4.6	51	149	6	663
10600	1458	14.3	4.5	52	145	6	662
10700	1453	14.1	4.5	52	143	6	662
10800	1448	13.8	4.4	53	143	6	662
10900	1443	13.6	4.4	53	144	7	661
11000	1437	13.3	4.3	54	142	6	661
11100	1432	13.0	4.2	55	139	7	661
11200	1427	12.7	4.1	55	135	7	660
11300	1422	12.5	3.9	56	130	5	660
11400	1417	12.2	3.8	56	133	7	659
11500	1412	11.9	3.7	57	132	6	659
11600	1407	11.6	3.6	58	127	7	659
11700	1402	11.3	3.5	58	124	6	658
11800	1396	11.1	3.3	59	129	8	658
11900	1391	10.8	3.2	59	131	7	657
12000	1386	10.5	3.1	60	129	8	657
12100	1381	10.3	3.0	61	130	8	657
12200	1376	10.0	3.0	61	128	6	657
12300	1371	9.8	2.9	62	126	9	656
12400	1366	9.5	2.8	63	128	9	656
12500	1361	9.3	2.8	64	130	7	656
12600	1356	9.0	2.7	64	129	8	656
12700	1351	8.8	2.6	65	130	9	656
13000	1336	8.0	2.4	67	124	3	655
14000	1288	5.5	1.6	76	114	1	652
15000	1241	2.8	0.7	86	156	0	648
16000	1195	0.9	-3.3	73	180	1	646

(CONTINUED)



4 AUG 87

2133 ZULU

(CONTINUED)

ALT	ATMOSPHERIC	REL	WIND DIR	WIND	SOUND		
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
17000	1150	-1.4	-6.1	70	102	3	643
18000	1107	-3.3	-16.0	36	99	2	640
19000	1065	-4.2	-24.1	19	108	4	639
20000	1025	-5.7	-26.3	17	73	5	637
21000	986	-8.2	-28.2	18	54	7	634
22000	948	-10.5	-30.1	18	71	5	631
23000	911	-12.2	-31.5	18	109	5	629
24000	875	-13.9	-32.9	18	97	3	627
25000	841	-16.1	-34.6	18	20	3	625
26000	807	-17.2	-35.5	18	35	5	623
27000	775	-18.7	-36.6	18	64	5	621
28000	744	-20.0	-37.7	18	89	3	620
29000	714	-22.3	-39.6	18	40	4	617
30000	685	-24.2	-41.1	19	299	3	615
31000	657	-26.3	-42.8	19	255	5	612
32000	630	-28.7	-44.6	19	332	1	609
33000	604	-31.5	-46.9	20	24	2	605
34000	578	-34.0	-48.8	20	352	4	602
35000	553	-36.7	-51.0	20	356	6	599
36000	529	-39.3	-53.1	21	357	7	596
37000	506	-41.9	-55.1	21	281	1	592
38000	484	-44.5	-57.2	22	213	4	589

5 AUG 87

0956 ZULU

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
2372	1936	26.2	6.8	29	220	5	675
3000	1895	29.3	6.5	23	298	3	679
4000	1831	29.9	5.7	21	330	5	679
5000	1769	28.4	5.4	23	301	5	678
6000	1709	26.4	4.6	24	269	5	676
7000	1651	25	4.6	26	256	4	674
8000	1595	22.1	3.5	29	266	3	671
9000	1539	19.1	2.8	33	300	3	667
10000	1486	16.6	2.5	38	331	3	664
11000	1433	13.4	1.9	45	359	3	661
12000	1382	10.8	1.1	51	50	4	658
13000	1332	8.2	0.2	57	79	8	655
14000	1284	5.6	-0.6	64	88	10	652
15000	1237	3.7	-3.8	58	100	12	649
16000	1191	1.3	-4.9	63	110	13	646
17000	1147	-0.8	-5.4	71	118	10	644
18000	1104	-3.5	-9.4	63	130	7	640
19000	1062	-6.4	-11.2	68	132	8	637
20000	1022	-8.4	-9.1	95	134	9	635
21000	982	-9.4	-20.8	38	84	7	633
22000	944	-11.0	-23.4	35	35	3	631
23000	908	-12.1	-25.1	32	298	1	630
24000	872	-13.6	-26.2	33	249	4	628
25000	838	-14.6	-27.5	32	269	9	626
26000	805	-15.7	-28.6	31	262	10	625
27000	773	-17.2	-30.0	31	229	6	623
28000	742	-20.1	-31.4	35	204	8	620
29000	712	-22.0	-34.2	32	250	7	617
30000	683	-24.2	-36.1	32	265	7	615
31000	655	-26.7	-38.3	32	239	4	612
32000	628	-29.1	-40.4	32	260	4	609
33000	602	-31.4	-42.4	32	250	3	606
34000	576	-34.1	-44.8	32	212	1	602
35000	552	-36.8	-47.1	33	227	3	599
36000	528	-39.3	-49.3	33	215	3	596
37000	505	-41.9	-51.7	33	164	2	592
38000	483	-44.7	-54.1	33	151	4	589
39000	461	-47.2	-56.4	33	157	7	586
40000	440	-49.3	-58.3	33	162	9	583
41000	420	-51.8	-60.5	33	162	13	580
42000	401	-54.2	-62.8	33	159	17	576
43000	382	-56.3	-64.6	33	157	17	574
44000	364	-58.4	-66.5	33	156	18	571
45000	347	-60.1	99.9	999	157	16	568
46000	331	-62.5	99.9	999	165	9	565
47000	315	-63.6	99.9	999	150	6	564
48000	299	-65.9	99.9	999	103	7	561

(CONTINUED)

5 AUG 87

0956 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
49000	285	-68.7	99.9	999	57	6	557
50000	271	-70.3	99.9	999	74	2	555
51000	257	-71.9	99.9	999	180	4	553
52000	244	-73.5	99.9	999	334	1	550
53000	232	-73.4	99.9	999	1	8	550
54000	220	-72.2	99.9	999	8	9	552
55000	209	-69.2	99.9	999	55	4	556
56000	199	-69.7	99.9	999	72	7	556
57000	189	-69.1	99.9	999	85	10	556
58000	179	-69.0	99.9	999	72	3	556
59000	171	-67.9	99.9	999	352	5	558
60000	162	-66.9	99.9	999	9	8	559
61000	154	-67.3	99.9	999	53	11	559
62000	147	-68.2	99.9	999	84	14	558
63000	139	-66.2	99.9	999	96	15	550
64000	133	-64.8	99.9	999	81	12	562
65000	126	-63.3	99.9	999	68	12	564
66000	120	-61.3	99.9	999	71	14	567
67000	114	-59.9	99.9	999	117	12	569
68000	109	-59.8	99.9	999	107	10	569
69000	104	-59.7	99.9	999	81	11	569
70000	99	-58.0	99.9	999	68	14	571
71000	94	-55.8	99.9	999	66	17	574
72000	90	-54.5	99.9	999	71	21	576
73000	86	-54.8	99.9	999	82	24	576
74000	82	-55.7	99.9	999	77	23	574
75000	78	-56.2	99.9	999	72	21	574
76000	74	-56.1	99.9	999	70	19	574
77000	71	-54.8	99.9	999	73	16	576
78000	68	-53.4	99.9	999	71	17	577
79000	64	-51.0	99.9	999	84	27	581
80000	61	-50.7	99.9	999	91	30	581
81000	59	-51.4	99.9	999	97	28	580
82000	56	-50.5	99.9	999	105	24	581
83000	53	-50.8	99.9	999	105	26	581
84000	51	-50.1	99.9	999	100	24	582
85000	49	-49.3	99.9	999	94	22	583
86000	46	-49.3	99.9	999	91	21	583
87000	44	-48.7	99.9	999	83	22	584
88000	42	-47.1	99.9	999	80	25	586
89000	40	-45.4	99.9	999	82	29	588
90000	39	-44.7	99.9	999	87	36	589
91000	37	-44.9	99.9	999	84	34	588
92000	35	-45.2	99.9	999	82	31	588
93000	34	-45.2	99.9	999	84	28	588
94000	32	-45.3	99.9	999	37	26	588
95000	31	-44.0	99.9	999	74	33	590

(CONTINUED)

5 AUG 87

0956 ZULU

(CONTINUED)

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
96000	29	-42.3	99.9	999	69	37	592
97000	28	-41.2	99.9	999	74	36	593
98000	27	-40.6	99.9	999	88	35	594
99000	26	-40.3	99.9	999	87	35	594
100000	25	-40.0	99.9	999	999	999	595
101000	23	-39.6	99.9	999	999	999	595

5 AUG 87

1400 ZUIU

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
2372	1939	25.0	7.6	33	210	3	674
3000	1897	28.2	7.8	27	201	2	678
4000	1833	29.5	6.6	23	34	1	679
5000	1771	27.8	6.1	25	24	3	677
6000	1711	25.9	5.1	26	41	3	675
7000	1653	24.4	4.7	28	16	3	673
8000	1596	22.3	3.8	29	12	3	671
9000	1541	19.5	3.1	33	11	5	668
10000	1487	16.3	2.4	39	348	3	664
11000	1435	14.0	2.3	45	50	8	661
12000	1383	8.6	1.4	60	269	7	655
13000	1333	7.0	1.7	69	262	12	653
14000	1285	4.9	2.1	82	178	6	651
15000	1238	2.7	1.0	88	138	9	648
16000	1192	0.7	-1.2	86	123	9	646
17000	1148	-1.2	-3.8	82	109	7	643
18000	1105	-4.0	-6.1	85	118	4	640
19000	1063	-5.6	-11.0	68	125	3	638
20000	1022	-6.6	-20.3	32	105	4	636
21000	983	-8.1	-22.9	29	87	5	634
22000	945	-9.9	-26.7	23	50	3	632
23000	909	-11.8	-28.4	23	355	4	630
24000	873	-13.1	-29.5	23	354	6	628
25000	839	-14.5	-30.8	23	46	7	627
26000	806	-16.5	-32.3	23	326	3	624
27000	774	-17.7	-33.3	23	287	6	623
28000	743	-19.5	-34.8	24	285	4	620
29000	713	-21.8	-36.6	24	281	3	618
30000	684	-23.9	-38.3	24	19	1	615
31000	656	-27.3	-41.0	25	327	0	611
32000	629	-29.1	-42.5	25	252	7	609
33000	602	-31.2	-44.2	26	236	7	606
34000	577	-34.0	-46.4	27	209	5	602
35000	552	-36.7	-48.5	27	219	4	599
36000	529	-39.0	-50.5	28	242	3	596
37000	506	-41.8	-52.7	29	224	5	592
38000	483	-44.5	-54.9	29	195	6	589
39000	462	-47.4	-57.4	30	198	10	585
40000	441	-49.7	-59.2	31	221	16	582
41000	421	-52.0	-61.2	31	216	14	579
42000	401	-53.2	-65.7	19	214	15	578
43000	383	-56.5	-65.0	32	223	18	573
44000	365	-58.2	-66.4	33	999	999	571

5 AUG 87

1730 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1939	36.3	10.5	21	190	6	687
3000	1899	32.9	7.8	21	226	3	683
4000	1835	29.9	6.9	23	223	3	680
5000	1773	27.1	5.9	25	216	3	676
6000	1713	25.0	5.4	28	284	1	674
7000	1654	23.1	4.8	30	330	3	672
8000	1597	21.7	3.5	30	344	4	670
9000	1542	19.5	2.5	32	337	5	668
10000	1488	16.7	2.4	38	327	5	664
11000	1436	13.7	1.8	44	336	3	661
12000	1384	10.9	1.5	52	354	3	658
13000	1335	8.0	1.4	62	34	3	654
14000	1286	5.2	1.5	77	90	4	651
15000	1239	2.9	0.4	83	126	8	649
16000	1193	0.8	-1.0	87	127	8	646
17000	1149	-1.2	-3.1	87	116	9	643
18000	1106	-3.4	-7.0	76	149	10	641
19000	1064	-6.0	-8.6	81	160	6	637
20000	1023	-7.5	-17.9	43	109	4	635
21000	984	-8.9	-23.1	30	105	3	633
22000	946	-10.3	-25.8	26	68	3	632
23000	909	-11.7	-28.3	23	57	6	630
24000	874	-13.1	-29.5	23	57	8	628
25000	840	-14.4	-30.7	23	46	8	627
26000	807	-16.1	-32.0	23	34	7	625
27000	775	-17.9	-33.5	24	29	4	622
28000	744	-19.7	-34.9	24	339	1	620
29000	714	-21.7	-36.5	24	255	1	618
30000	685	-24.1	-38.5	24	232	2	615
31000	657	-26.5	-40.4	25	242	2	612
32000	629	-28.7	-42.2	25	240	1	609
33000	603	-31.5	-44.4	26	240	1	606
34000	578	-33.9	-46.3	27	238	2	603
35000	553	-36.8	-48.7	27	223	4	599
36000	529	-39.0	-50.4	28	217	6	596
37000	506	-42.0	-53.0	28	216	7	592
38000	484	-44.1	-54.5	29	229	12	590
39000	462	-46.3	-56.2	31	229	15	587
40000	441	-49.2	-58.5	32	227	18	583
41000	421	-51.8	-60.8	32	231	21	579
42000	402	-53.9	-62.5	33	236	22	577
43000	383	-56.2	-64.4	34	242	19	574
44000	365	-57.5	-65.5	34	249	11	572
45000	348	-58.8	-66.8	34	237	5	570
46000	332	-60.8	99.9	999	157	4	568
47000	316	-62.8	99.9	999	145	11	565
48000	301	-64.8	99.9	999	148	16	562

(CONTINUED)

5 AUG 87

1730 ZULU

(CONTINUED)

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
49000	286	-66.8	99.9	999	150	12	560
50000	272	-68.6	99.9	999	144	6	557
51000	258	-70.3	99.9	999	119	3	555
52000	245	-70.8	99.9	999	71	4	554
53000	233	-70.9	99.9	999	58	7	554
54000	222	-70.7	99.9	999	63	6	554
55000	210	-70.6	99.9	999	69	5	554
56000	200	-68.3	99.9	999	999	999	557

6 AUG 87

1027 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1936	23.5	11.9	48	210	10	673
3000	1895	28.0	9.0	30	239	12	678
4000	1831	29.2	5.5	22	299	4	679
5000	1769	27.4	2.8	20	2	6	676
6000	1709	25.2	1.4	21	347	8	674
7000	1650	23.1	-0.3	21	330	9	671
8000	1593	21.1	-1.5	21	320	7	669
9000	1538	18.6	-2.6	23	326	5	666
10000	1484	16.2	-3.4	25	339	5	663
11000	1432	13.6	-3.1	31	328	3	661
12000	1381	10.8	-2.8	38	341	2	657
13000	1331	8.0	-1.2	52	58	3	654
14000	1283	5.3	0.2	70	77	9	651
15000	1236	2.7	1.4	91	79	14	648
16000	1190	0.5	-3.5	75	86	15	645
17000	1146	-1.1	-3.6	83	104	14	644
18000	1103	-2.5	-8.8	62	95	12	642
19000	1061	-4.8	-12.7	53	104	12	639
20000	1021	-7.3	-13.5	61	116	9	636
21000	981	-9.1	-18.2	47	106	4	633
22000	944	-11.1	-19.2	51	98	6	631
23000	907	-11.3	-29.7	20	17	9	630
24000	872	-12.4	-31.2	19	2	9	629
25000	837	-14.2	-32.8	18	6	8	627
26000	804	-15.6	-33.9	18	19	3	625
27000	773	-17.8	-35.7	19	321	2	623
28000	742	-20.2	-37.3	19	282	3	620
29000	712	-22.6	-39.7	19	290	5	617
30000	683	-25.0	-41.5	19	299	6	614
31000	655	-27.5	-43.4	20	290	5	611
32000	627	-30.1	-45.5	20	274	6	607
33000	601	-32.7	-47.4	21	258	7	604
34000	576	-35.0	-48.8	22	246	5	601
35000	551	-37.9	-50.8	24	231	7	597
36000	527	-40.3	-52.5	25	233	11	594
37000	504	-42.6	-54.1	26	239	13	591
38000	482	-45.2	-56.1	27	239	16	588
39000	460	-47.7	-58.3	27	235	20	585
40000	439	-50.5	-60.6	28	231	21	581
41000	419	-53.0	-62.8	28	227	18	578
42000	400	-55.6	-65.0	29	227	17	574
43000	381	-57.8	-66.9	29	226	16	572
44000	363	-60.2	99.9	999	222	14	568
45000	346	-62.2	99.9	999	221	16	566
46000	329	-64.4	99.9	999	232	17	563
47000	313	-65.3	99.9	999	256	13	561
48000	298	-66.2	99.9	999	264	8	560

(CONTINUED)



6 AUG 87

1027 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
49000	283	-67.2	99.9	999	201	6	559
50000	269	-67.9	99.9	999	194	6	558
51000	256	-70.0	99.9	999	211	3	555
52000	243	-70.4	99.9	999	213	2	555
53000	231	-71.7	99.9	999	206	2	553
54000	219	-71.1	99.9	999	253	0	554
55000	209	-70.9	99.9	999	133	5	554
56000	198	-71.9	99.9	999	147	9	552
57000	188	-71.1	99.9	999	170	7	554
58000	179	-70.1	99.9	999	235	3	555
59000	170	-70.0	99.9	999	346	8	555
60000	161	-69.3	99.9	999	22	15	556
61000	153	-67.5	99.9	999	999	999	559

6 AUG 87

1330 ZULU

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
2372	1939	22.2	11.0	49	240	6	671
3000	1897	24.9	9.2	37	246	6	674
4000	1833	26.8	5.6	25	225	1	676
5000	1770	25.4	3.2	23	13	3	674
6000	1710	23.5	0.6	22	346	8	672
7000	1651	21.7	-1.6	20	344	9	670
8000	1594	20.2	-3.6	19	348	10	668
9000	1538	18.2	-5.7	19	340	10	666
10000	1484	15.6	-6.4	21	338	8	663
11000	1431	13.0	-4.0	30	349	5	660
12000	1380	10.3	-3.8	37	16	5	657
13000	1331	7.6	-0.3	57	45	7	654
14000	1282	4.9	-0.5	68	63	8	651
15000	1235	2.5	-1.2	76	82	9	648
16000	1189	0.8	-4.4	68	108	12	646
17000	1145	-1.1	-9.6	52	116	14	643
18000	1102	-3.8	-6.6	81	113	10	640
19000	1060	-4.9	-12.3	56	70	6	639
20000	1020	-6.9	-14.0	56	82	8	636
21000	981	-8.4	-15.8	55	99	6	634
22000	943	-10.0	-21.0	43	91	3	632
23000	907	-10.9	-28.6	21	52	8	631
24000	871	-12.3	-30.7	19	38	12	629
25000	837	-14.0	-32.5	19	39	14	627
26000	804	-16.4	-34.3	19	45	15	624
27000	772	-18.9	-36.3	19	48	12	621
28000	741	-20.8	-37.9	19	57	4	619
29000	711	-22.9	-39.6	19	13	1	616
30000	682	-25.3	-41.5	20	291	2	613
31000	654	-27.8	-43.2	21	270	4	610
32000	627	-30.3	-45.2	21	278	5	607
33000	601	-32.7	-46.6	23	259	4	604
34000	575	-35.0	-47.9	25	229	6	601
35000	551	-37.6	-49.9	26	233	7	598
36000	527	-40.4	-52.1	27	231	10	594
37000	504	-42.6	-53.9	27	229	14	591
38000	481	-45.1	-55.7	28	231	17	588
39000	460	-47.6	-57.8	29	235	18	585
40000	439	-50.2	-59.9	30	238	17	582
41000	419	-52.7	-61.9	31	233	17	578
42000	400	-55.0	-63.9	31	233	17	575
43000	381	-57.4	-65.9	32	233	16	572
44000	363	-59.9	99.9	999	225	16	569
45000	346	-62.3	99.9	999	999	999	566

6 AUG 87

1655 ZULU

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KIS)
2387	1940	31.6	-23.3	2	360	2	680
3000	1900	29.1	-1.4	19	318	1	678
4000	1836	27.1	5.7	25	217	1	676
5000	1774	26.3	4.6	24	273	1	675
6000	1713	24.2	2.8	24	327	6	673
7000	1654	22.0	1.7	26	330	9	670
8000	1597	20.4	-1.0	23	331	11	668
9000	1541	18.8	-4.1	20	340	9	666
10000	1487	16.4	-5.3	22	349	8	664
11000	1435	13.9	-5.2	26	349	7	661
12000	1384	11.1	-5.8	30	23	7	657
13000	1334	8.3	0.1	56	61	7	655
14000	1286	5.9	0.8	69	85	9	652
15000	1239	3.3	0.2	80	97	11	649
16000	1193	1.6	-6.3	55	115	14	646
17000	1149	-0.5	-7.7	58	115	12	644
18000	1106	-2.6	-8.3	64	96	7	641
19000	1064	-4.5	-10.4	63	78	6	639
20000	1024	-5.9	-14.2	51	66	3	637
21000	985	-7.1	-18.8	38	101	2	636
22000	947	-8.6	-24.0	27	77	5	634
23000	910	-10.3	-28.3	21	59	12	632
24000	875	-11.9	-30.7	19	67	17	630
25000	841	-13.3	-32.0	18	75	15	628
26000	808	-15.5	-33.8	19	82	12	625
27000	776	-17.8	-35.6	19	80	7	623
28000	745	-20.1	-37.6	19	58	1	620
29000	715	-22.4	-39.4	19	254	0	617
30000	686	-24.9	-41.3	19	196	1	614
31000	657	-27.4	-43.3	20	204	3	611
32000	630	-29.5	-44.6	21	257	4	608
33000	604	-32.5	-46.2	23	265	6	604
34000	578	-35.4	-47.8	26	246	6	601
35000	553	-37.9	-49.7	27	233	9	597
36000	529	-40.2	-51.6	27	237	12	595
37000	506	-42.4	-53.4	28	248	14	592
38000	484	-45.1	-55.5	29	250	17	588
39000	462	-47.5	-57.4	30	245	17	585
40000	441	-49.7	-59.2	31	237	16	582
41000	421	-52.2	-61.3	31	224	15	579
42000	402	-54.9	-63.6	32	219	13	575
43000	383	-57.3	-65.6	33	229	19	572
44000	365	-59.5	99.9	999	235	25	569
45000	348	-61.6	99.9	999	242	21	566
46000	331	-63.4	99.9	999	258	15	564
47000	315	-64.5	99.9	999	274	9	563
48000	300	-66.1	99.9	999	230	3	560

(CONTINUED)

6 AUG 27

1655 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
49000	285	-67.8	99.9	999	190	6	558
50000	271	-68.4	99.9	999	207	6	557
51000	257	-68.8	99.9	999	214	4	557
52000	245	-68.8	99.9	999	174	4	557
53000	233	-68.8	99.9	999	130	4	557
54000	221	-68.9	99.9	999	78	4	557
55000	210	-67.9	99.9	999	41	3	558
56000	200	-66.8	99.9	999	334	2	559
57000	190	-68.9	99.9	999	344	6	557
58000	181	-68.2	99.9	999	31	10	558
59000	172	-66.7	99.9	999	71	17	560
60000	163	-65.4	99.9	999	113	20	561
61000	155	-64.2	99.9	999	135	20	563
62000	148	-64.9	99.9	999	131	13	562
63000	141	-63.5	99.9	999	106	11	564
64000	134	-62.4	99.9	999	99	14	565
65000	127	-62.0	99.9	999	106	16	566
66000	121	-59.6	99.9	999	109	16	569
67000	116	-59.5	99.9	999	93	17	569
68000	110	-58.6	99.9	999	87	20	571
69000	105	-58.6	99.9	999	92	22	570
70000	100	-58.1	99.9	999	100	25	571
71000	95	-56.3	99.9	999	101	27	573
72000	91	-56.1	99.9	999	91	28	574
73000	87	-54.8	99.9	999	84	28	576
74000	83	-54.6	99.9	999	85	30	576
75000	79	-54.3	99.9	999	89	32	576
76000	75	-53.7	99.9	999	94	32	577
77000	72	-53.1	99.9	999	98	29	578
78000	68	-51.7	99.9	999	98	26	580
79000	65	-50.4	99.9	999	97	25	581
80000	62	-49.8	99.9	999	97	27	582
81000	59	-49.2	99.9	999	95	30	583
82000	57	-43.2	99.9	999	94	33	584
83000	54	-46.7	99.9	999	94	36	586
84000	52	-46.2	99.9	999	97	39	587
85000	49	-45.2	99.9	999	103	40	588
86000	47	-44.2	99.9	999	106	41	589
87000	45	-43.7	99.9	999	104	41	590
88000	43	-44.0	99.9	999	98	42	590
89000	41	-44.6	99.9	999	95	42	589
90000	39	-44.6	99.9	999	98	38	589
91000	38	-44.0	99.9	999	99	36	590
92000	36	-43.3	99.9	999	100	33	591
93000	34	-42.5	99.9	999	101	33	592
94000	33	-41.4	99.9	999	101	33	593
95000	31	-40.2	99.9	999	100	32	595

(CONTINUED)

6 AUG 87

1655 ZULU

(CONTINUED)

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
96000	30	-39.2	99.9	999	95	32	596
97000	29	-38.8	99.9	999	91	32	596
98000	27	-38.8	99.9	999	89	32	596
99000	26	-38.4	99.9	999	92	35	597
100000	25	-37.9	99.9	999	93	38	597
101000	24	-37.2	99.9	999	91	43	598
102000	23	-36.0	99.9	999	999	999	600
103000	22	-34.8	99.9	999	999	999	601
104000	21	-33.5	99.9	999	999	999	603

7 AUG 87

0950 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1936	23.1	9.8	43	200	14	672
3000	1895	25.5	7.4	32	227	21	675
4000	1830	26.7	-0.4	17	241	20	675
5000	1768	25.1	-1.5	17	264	16	674
6000	1707	23.4	-2.7	17	257	16	672
7000	1648	21.7	-3.0	18	253	16	670
8000	1591	19.6	-5.4	17	257	17	667
9000	1536	17.6	-7.7	17	263	15	665
10000	1482	15.8	-6.7	21	270	11	663
11000	1429	13.0	-1.9	36	268	5	660
12000	1378	10.6	-0.2	47	53	0	657
13000	1328	8.6	-0.9	51	70	5	655
14000	1280	6.4	-2.1	54	67	9	652
15000	1234	3.9	-4.4	54	63	11	649
16000	1188	1.6	-7.0	52	65	9	646
17000	1144	-0.2	-8.2	54	75	6	644
18000	1101	-2.3	-8.4	62	82	4	642
19000	1060	-4.1	-14.6	43	33	3	639
20000	1020	-3.7	-25.5	16	34	10	640
21000	981	-4.8	-26.9	15	34	11	638
22000	944	-7.3	-28.8	16	37	10	635
23000	907	-9.9	-30.8	16	29	11	632
24000	872	-12.6	-33.0	16	23	11	629
25000	838	-15.4	-35.1	16	26	7	625
26000	805	-17.5	-36.8	16	30	3	623
27000	773	-18.9	-37.9	16	256	3	621
28000	742	-21.3	-39.4	17	231	9	618
29000	712	-23.7	-41.1	18	218	7	615
30000	682	-26.1	-42.9	18	214	5	612
31000	654	-28.7	-44.8	19	242	4	609
32000	627	-31.3	-46.4	20	236	6	606
33000	600	-33.2	-47.8	21	225	10	603
34000	575	-35.4	-49.5	21	227	11	601
35000	550	-38.3	-51.4	23	222	11	597
36000	526	-41.1	-53.3	25	219	12	593
37000	503	-44.0	-55.1	27	221	12	590
38000	481	-46.6	-57.0	28	226	13	586
39000	459	-48.7	-58.9	28	238	15	584
40000	438	-50.9	-60.9	28	241	16	581
41000	418	-53.1	-62.9	28	239	17	578
42000	399	-55.3	-64.8	28	241	15	575
43000	380	-57.4	-66.7	29	242	12	572
44000	362	-59.7	99.9	999	223	9	569
45000	345	-61.6	99.9	999	207	12	566
46000	328	-64.1	99.9	999	203	14	563
47000	312	-66.2	99.9	999	205	13	560
48000	297	-67.4	99.9	999	218	10	559

(CONTINUED)

7 AUG 87

0950 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
49000	283	-68.2	99.9	999	247	8	558
50000	269	-69.1	99.9	999	265	5	556
51000	255	-69.9	99.9	999	277	2	555
52000	243	-70.6	99.9	999	289	0	554
53000	230	-70.9	99.9	999	267	1	554
54000	219	-69.3	99.9	999	314	4	556
55000	208	-70.0	99.9	999	343	6	555
56000	198	-69.3	99.9	999	2	8	556
57000	188	-68.8	99.9	999	9	9	557
58000	179	-68.2	99.9	999	24	10	558
59000	170	-67.2	99.9	999	54	11	559
60000	162	-66.2	99.9	999	86	13	560
61000	154	-65.0	99.9	999	102	12	562
62000	146	-64.6	99.9	999	93	7	562
63000	139	-62.9	99.9	999	92	8	565
64000	132	-61.7	99.9	999	95	12	566
65000	126	-60.9	99.9	999	101	14	567
66000	120	-60.3	99.9	999	112	14	568
67000	114	-59.9	99.9	999	128	14	569
68000	109	-58.8	99.9	999	120	13	570
69000	104	-57.9	99.9	999	101	16	571
70000	99	-57.3	99.9	999	95	18	572
71000	94	-56.8	99.9	999	93	19	573
72000	90	-55.7	99.9	999	85	20	574
73000	86	-55.4	99.9	999	77	25	575
74000	82	-55.4	99.9	999	79	28	575
75000	78	-55.6	99.9	999	83	30	575
76000	74	-55.4	99.9	999	86	31	575
77000	71	-54.7	99.9	999	91	32	576
78000	63	-53.6	99.9	999	95	33	577
79000	64	-52.2	99.9	999	96	33	579
80000	61	-50.9	99.9	999	92	34	581
81000	59	-49.9	99.9	999	93	35	582
82000	56	-49.4	99.9	999	93	35	583
83000	53	-49.3	99.9	999	91	34	583
84000	51	-49.3	99.9	999	89	33	583
85000	49	-49.0	99.9	999	91	32	583
86000	47	-48.3	99.9	999	93	31	584
87000	44	-47.1	99.9	999	91	33	586
88000	42	-45.8	99.9	999	91	34	587
89000	41	-44.4	99.9	999	92	33	589
90000	39	-43.0	99.9	999	91	29	591
91000	37	-43.1	99.9	999	91	31	591
92000	35	-43.8	99.9	999	92	35	590
93000	34	-43.8	99.9	999	94	42	590
94000	32	-43.5	99.9	999	94	48	590
95000	31	-43.2	99.9	999	91	47	591

(CONTINUED)

7 AUG 87

0950 ZULU

(CONTINUED)

ALT MSL FEET	ATMOSPHERIC PRESS (PSF)	TEMP (°C)	DEWPT (°C)	REL HUM (%)	WIND DIR (T NORTH) (°)	WIND SPEED (KTS)	SOUND SPEED (KTS)
96000	29	-42.7	99.9	999	92	47	591
97000	28	-42.2	99.9	999	95	47	592
98000	27	-41.6	99.9	999	93	50	593
99000	26	-40.9	99.9	999	91	50	594
100000	25	-39.5	99.9	999	90	47	595
101000	23	-38.3	99.9	999	90	45	597
102000	22	-37.2	99.9	999	92	44	598
103000	21	-35.7	99.9	999	92	42	600
104000	21	-34.2	99.9	999	91	40	602
105000	20	-34.2	99.9	999	84	35	602
106000	19	-34.4	99.9	999	77	32	602
107000	18	-35.3	99.9	999	74	35	601
108000	17	-36.0	99.9	999	999	999	600
109000	16	-36.4	99.9	999	999	999	599



7 AUG 87

1330 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1937	22.8	11.8	50	230	13	672
3000	1895	25.3	6.0	20	237	21	674
4000	1831	26.1	-0.9	17	247	18	675
5000	1768	24.9	-2.3	16	261	12	673
6000	1708	22.9	-3.0	17	258	11	671
7000	1649	22.0	-6.3	14	255	11	670
8000	1592	19.7	-8.3	14	253	10	667
9000	1536	17.6	-9.0	15	241	8	665
10000	1482	15.6	-7.2	20	223	5	663
11000	1429	13.2	-2.6	34	196	4	660
12000	1378	10.5	0.1	48	166	3	657
13000	1329	8.0	0.0	57	102	4	654
14000	1281	6.1	-0.3	63	86	8	652
15000	1234	4.3	-3.0	58	77	8	650
16000	1188	2.2	-5.6	56	56	6	647
17000	1144	-0.1	-7.8	56	9	4	644
18000	1102	-1.6	-14.1	38	76	4	642
19000	1060	-2.1	-19.7	25	89	6	642
20000	1020	-2.7	-24.4	16	49	8	641
21000	982	-4.6	-26.8	15	26	11	638
22000	944	-7.4	-28.9	15	22	12	635
23000	908	-10.1	-31.0	16	29	10	632
24000	873	-12.2	-32.6	16	40	9	629
25000	839	-14.1	-34.1	16	43	9	627
26000	806	-16.7	-36.2	16	34	9	624
27000	774	-19.3	-38.3	16	22	8	621
28000	742	-21.8	-40.2	16	19	8	618
29000	712	-24.0	-42.0	17	7	5	615
30000	683	-26.0	-43.3	17	272	3	612
31000	655	-28.5	-44.9	18	240	4	609
32000	628	-30.9	-46.6	19	234	6	606
33000	601	-32.7	-48.0	19	232	10	604
34000	576	-35.0	-49.9	20	228	8	601
35000	551	-37.9	-51.8	21	217	10	597
36000	527	-40.2	-53.3	22	217	12	594
37000	504	-42.7	-55.4	22	221	12	591
38000	482	-45.2	-57.3	23	235	11	588
39000	460	-47.4	-59.2	23	249	11	585
40000	439	-50.0	-61.3	24	248	11	582
41000	419	-52.5	-63.4	25	229	12	579
42000	400	-55.4	-65.7	26	220	13	575
43000	381	-57.2	-67.0	26	200	9	572

7 AUG 87

1625 ZULU

ALT	ATMOSPHERIC			REL	WIND DIR	WIND	SOUND
MSL	PRESS	TEMP	DEWPT	HUM	(T NORTH)	SPEED	SPEED
FEET	(PSF)	(°C)	(°C)	(%)	(°)	(KTS)	(KTS)
2372	1940	31.2	4.1	18	240	15	681
3000	1899	29.1	2.2	17	237	16	678
4000	1834	25.6	-0.2	18	229	16	674
5000	1772	24.5	-2.3	16	230	9	673
6000	1711	22.0	-3.5	17	234	7	670
7000	1651	20.7	-6.7	15	216	9	668
8000	1594	18.8	-8.4	14	204	10	666
9000	1538	16.8	-9.9	15	191	8	664
10000	1434	15.2	-8.3	18	163	8	662
11000	1431	12.6	-3.4	32	143	8	659
12000	1380	10.1	-1.2	46	134	5	657
13000	1330	7.5	-0.2	58	126	4	654
14000	1282	5.2	-0.1	68	135	6	651
15000	1235	3.4	-0.1	77	131	6	649
16000	1189	1.8	-2.4	73	122	7	647
17000	1145	-0.5	-8.1	56	105	5	644
18000	1102	-1.9	-11.6	47	90	3	642
19000	1061	-2.2	-18.4	28	36	5	642
20000	1021	-3.4	-24.7	17	20	11	640
21000	982	-5.6	-26.5	17	25	13	637
22000	945	-8.1	-28.4	17	27	15	634
23000	908	-10.8	-30.5	17	23	15	631
24000	873	-13.5	-32.5	18	24	13	628
25000	839	-15.7	-34.3	18	31	8	625
26000	805	-17.1	-35.5	18	28	6	623
27000	773	-19.6	-37.5	18	21	7	620
28000	742	-22.3	-39.6	18	33	5	617
29000	712	-24.9	-41.7	19	100	2	614
30000	683	-26.5	-42.7	19	211	2	612
31000	654	-29.0	-42.5	25	230	7	609
32000	627	-31.1	-43.5	28	230	11	606
33000	601	-33.0	-44.9	29	229	10	604
34000	575	-35.5	-47.3	28	229	9	601
35000	550	-38.4	-48.8	32	217	8	597
36000	527	-40.7	-50.4	33	192	12	594
37000	503	-42.9	-52.2	34	200	15	591
38000	481	-45.1	-54.5	33	216	13	588
39000	460	-47.2	-56.4	33	220	11	586
40000	439	-50.0	-58.8	33	218	10	582
41000	419	-52.7	-61.1	34	224	10	578
42000	400	-55.0	-63.2	35	239	9	575
43000	381	-57.0	-64.9	35	999	999	573

# Ground Station Weather Data

EVENT	TIME (PST)	TEMP (°C)	BAROMETRIC PRESSURE (In Hg)	WIND SPEED (Knots)	WIND DIR Deg. from Mag. North
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## 3 AUG 87

Pre-test	0721	25.0	29.94	1-2	350-010
Pre-test	0745	28.3	29.94	1-2	020-060
F-4 @ 29 KMSL	0747	28.9	29.94	2-3	030-050
F-4 @ 29 KMSL	0758	30.0	29.94	2-3	120-140
Pre-test	0953	33.9	29.96	3-4	180-220
T-38 @ 14 KMSL	1005	35.0	29.96	2-4	170-200
T-38 @ 13 KMSL	1012	35.6	29.96	2-4	190-210
F-4 @ 14 KMSL	1030	36.1	29.96	2-4	260-290
F-4 @ 43 KMSL	1043	37.2	29.96	2-4	290-330
Pre-Test	1220	40.6	29.95	4-6	090-120
T-38 @ 30 KMSL	1228	40.6	29.95	4-6	080-120
T-38 @ 21 KMSL	1238	41.1	29.95	2-4	090-140
Post-test	1257	41.1	29.96	4-6	070-110

## 4 AUG 87

Pre-test	0645	21.1	29.94	1-2	020-040
AT-38 @ 41 KMSL	0719	29.4	29.94	1-2	090-100
AT-38 @ 30 KMSL	0730	31.1	29.94	0-2	280-300
F-15 @ 39 KMSL	0756	32.2	29.94	0-2	050-080
F-15 @ 28 KMSL	0804	32.2	29.94	2-3	140-160
F-15 @ 12 KMSL	0811	32.8	29.94	3-4	140-170
AT-38 @ 29 KMSL	0914	33.9	29.95	2-4	090-120
AT-38 @ 13 KMSL	0923	34.4	29.95	2-4	240-270
F-15 @ 15 KMSL	1046	37.8	29.95	2-4	060-100
F-15 @ 29 KMSL	1102	37.8	29.94	1-3	120-160
F-15 @ 43 KMSL	1112	40.0	29.94	2-4	030-060
F-15 @ 43 KMSL	1134	40.6	29.94	2-4	010-030

Ground Station Weather Data (continued)

EVENT	TIME (PST)	TEMP (°C)	BAROMETRIC PRESSURE (In Hg)	WIND SPEED (Knots)	WIND DIR Deg. from Mag. North
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5 AUG 87

Pre-test	0758	30.6	29.94	1-2	270-300
F-16 @ 28 KMSL	0907	33.9	29.94	1-2	160-190
SR-71 @ 66 KMSL	0926	34.4	29.94	2-4	060-100
F-16 @ 42 KMSL	0934	35.0	29.93	2-4	140-170
F-16 @ 18 KMSL	0944	35.6	29.93	1-2	140-180
SR-71 @ 73 KMSL	1055	36.7	29.94	2-4	140-170
SR-71 @ 30 KMSL	1108	37.2	29.94	3-6	140-180
F-16 @ 13 KMSL	1144	38.9	29.93	2-4	060-140
F-16 @ 13 KMSL	1154	38.9	29.93	2-4	080-140
F-16 @ 28 KMSL	1204	39.4	29.93	4-7	090-110
SR-71 @ 50 KMSL	1235	38.3	29.93	2-4	130-140

6 AUG 87

Pre-test	0734	26.1	29.93	1-2	090-120
F-18 @ 30 KMSL	0744	26.7	29.93	1-2	080-100
F-18 @ 45 KMSL	0755	27.8	29.93	1-2	080-100
F-18 @ 14 KMSL	0810	28.3	29.94	1-3	060-090
F-14 @ 32 KMSL	0828	28.9	29.94	2-3	020-060
F-18 @ 30 KMSL	1022	34.4	29.94	1-3	070-090
F-18 @ 43 KMSL	1034	35.0	29.94	2-4	060-110
F-14 @ 13 KMSL	1043	35.6	29.94	2-4	060-090
F-18 @ 13 KMSL	1048	36.1	29.94	3-5	070-090
F-111 @ 13 KMSL	1148	37.2	29.94	4-7	100-140
F-111 @ 43 KMSL	1204	37.8	29.94	2-4	020-080

7 AUG 87

Pre-test	0757	20.0	29.90	1-2	010-030
F-111 @ 28 KMSL	1054	31.7	29.93	7-10	180-220

**APPENDIX D: Sonic Boom Signatures**

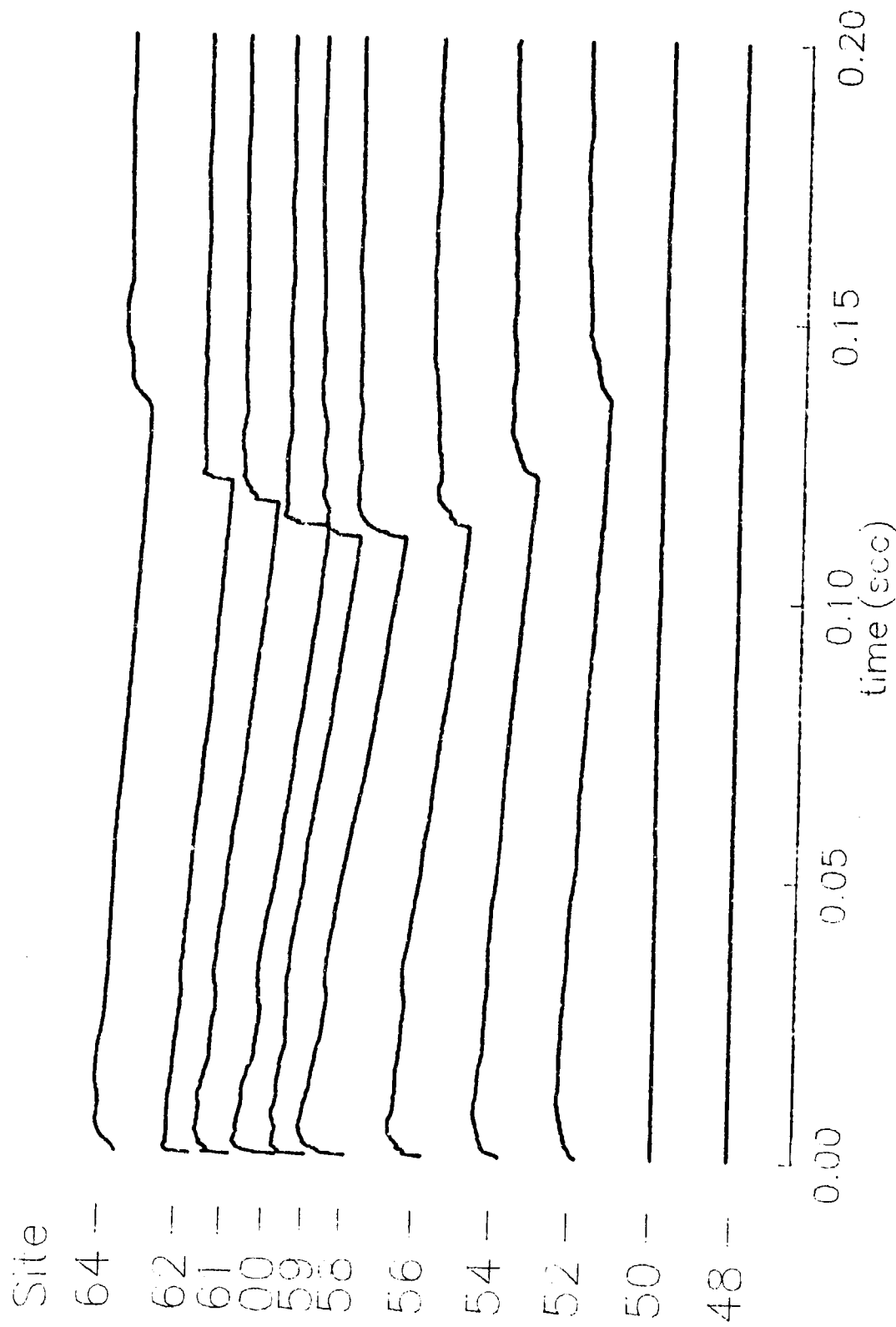


Figure D-1. F-4 on 31 Jul 87 at 0841

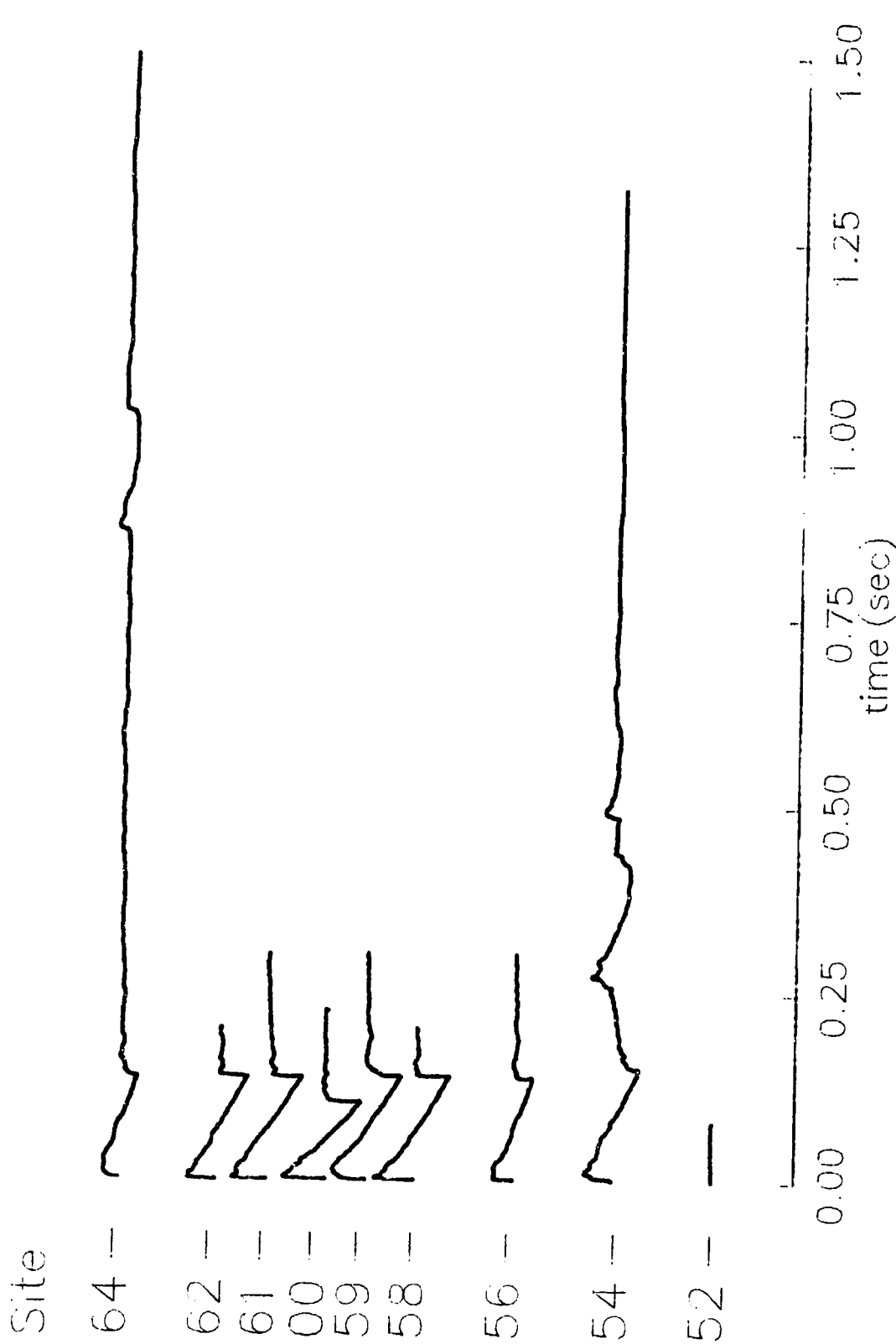


Figure D-2. F-4 on 3 Aug 87 at 0748

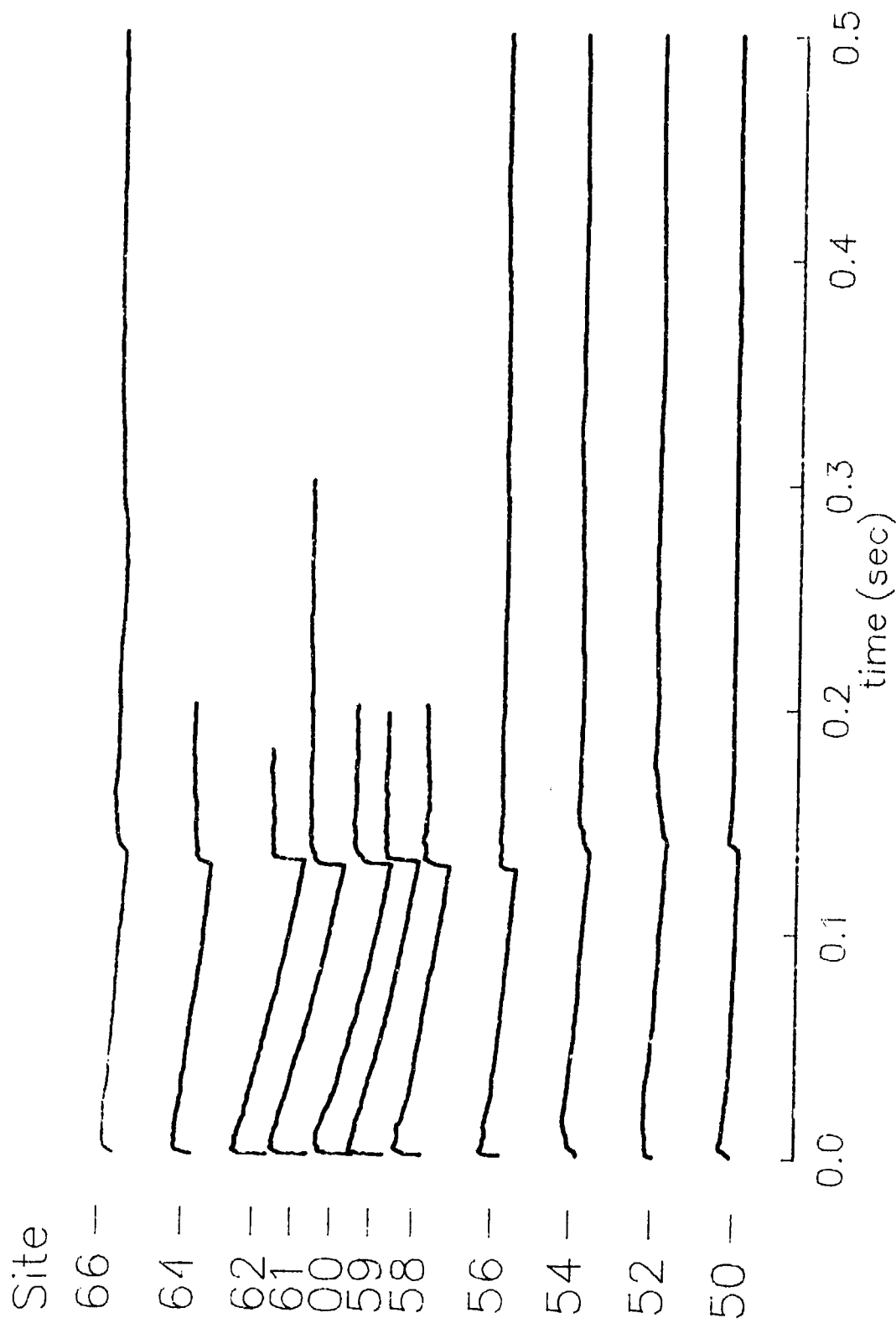


Figure D-3. F-4 on 3 Aug 87 at 0758



Site

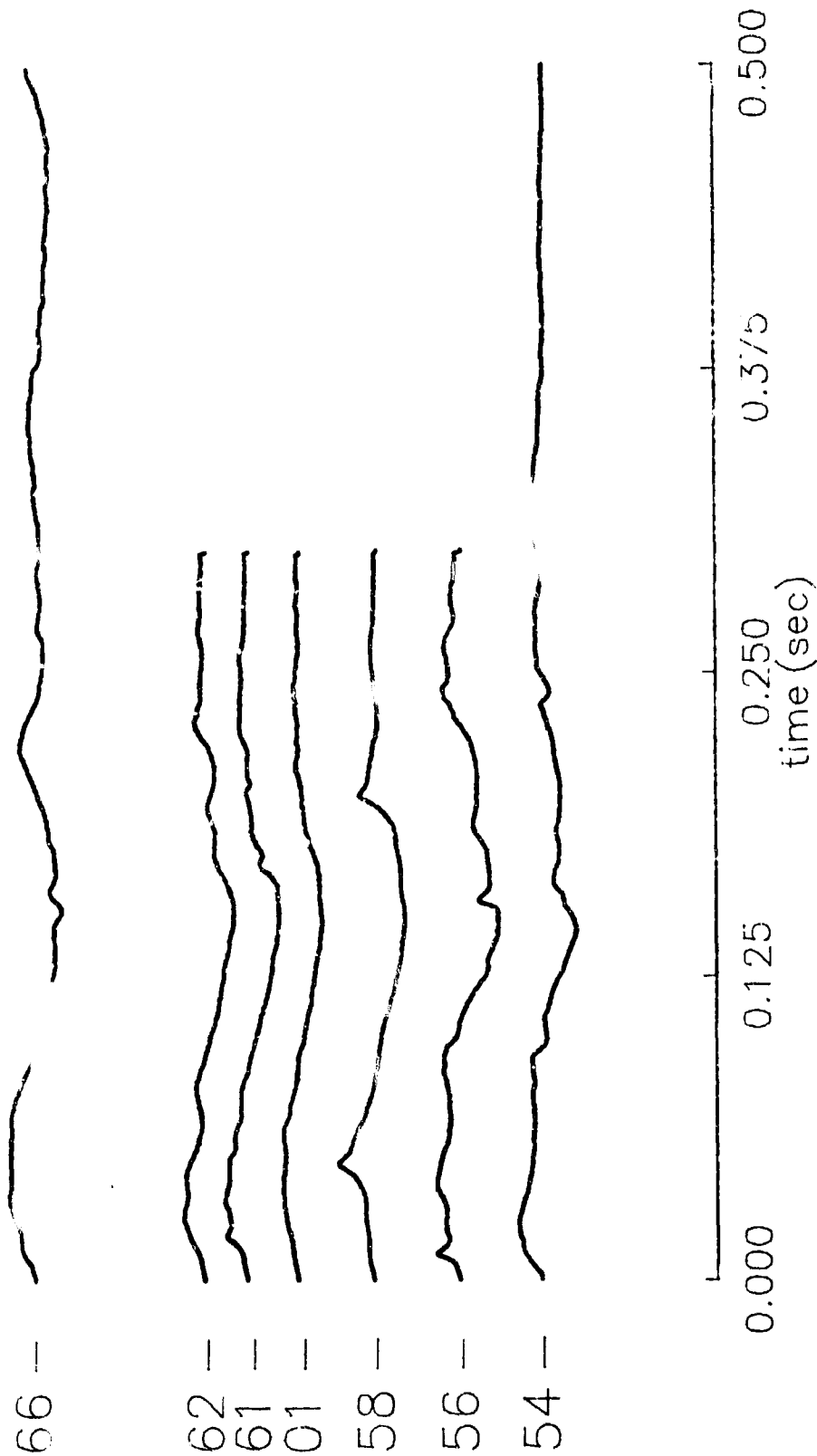


Figure D-4. F-4 on 3 Aug 87 at 0808

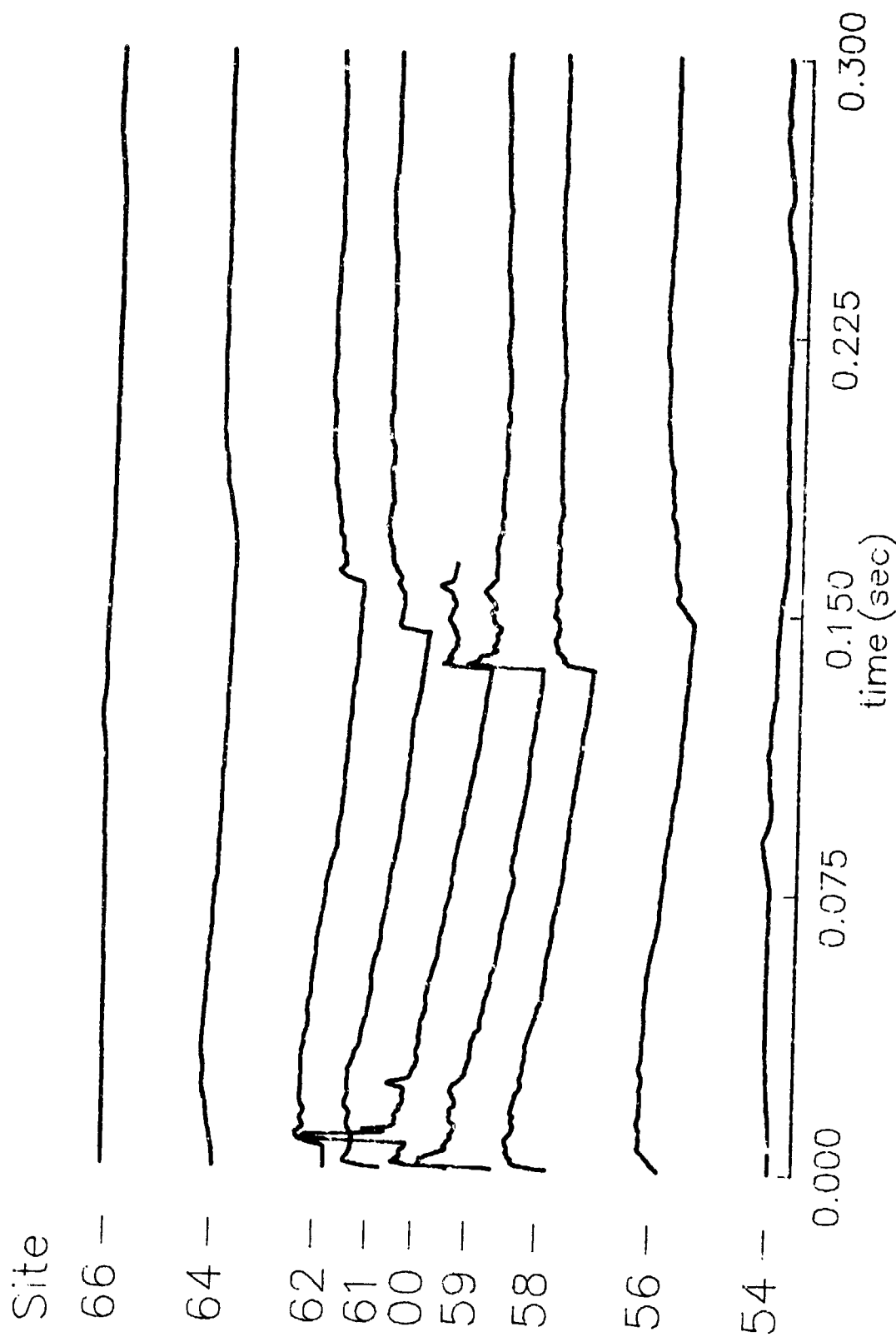


Figure D-5. F-4 on 3 Aug 87 at 1029

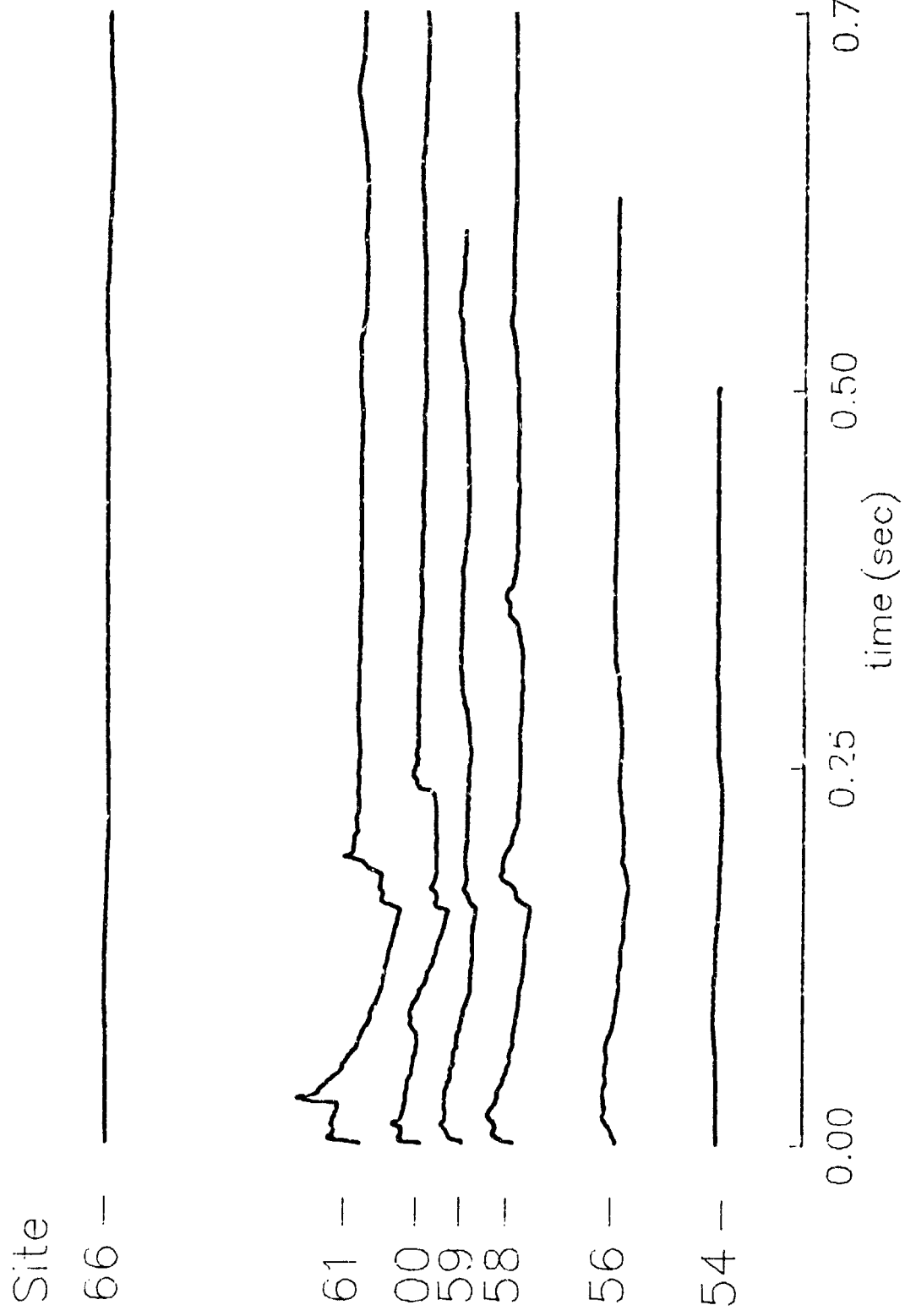


Figure D-6. F-4 on 3 Aug 87 at 1043

Site

00 -



59 -



58 -

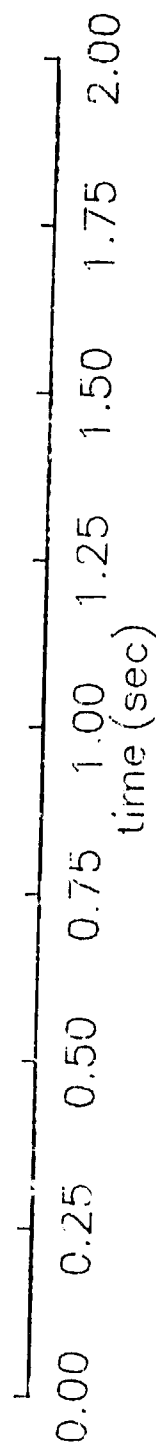


Figure D--7. T-38 on 3 Aug 87 at 1005

Site

64 -



62 -



61 -



58 -



56 -



0.00

0.25

0.50

time (sec)

Figure D-8. T-38 on 3 Aug 87 at 1012

Site

59 -



0.0 0.2 0.4 0.6 0.8 1.0  
time (sec)

Figure D-9. T-38 on 3 Aug 87 at 1228

Site

66 -



62 -



61 -



00 -



59 -



58 -

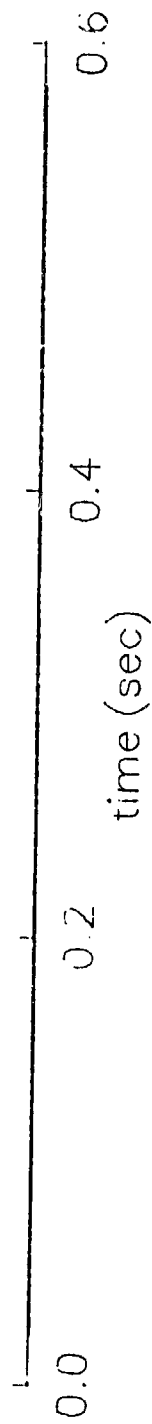


Figure D-10. T-38 on 3 Aug 87 at 1238

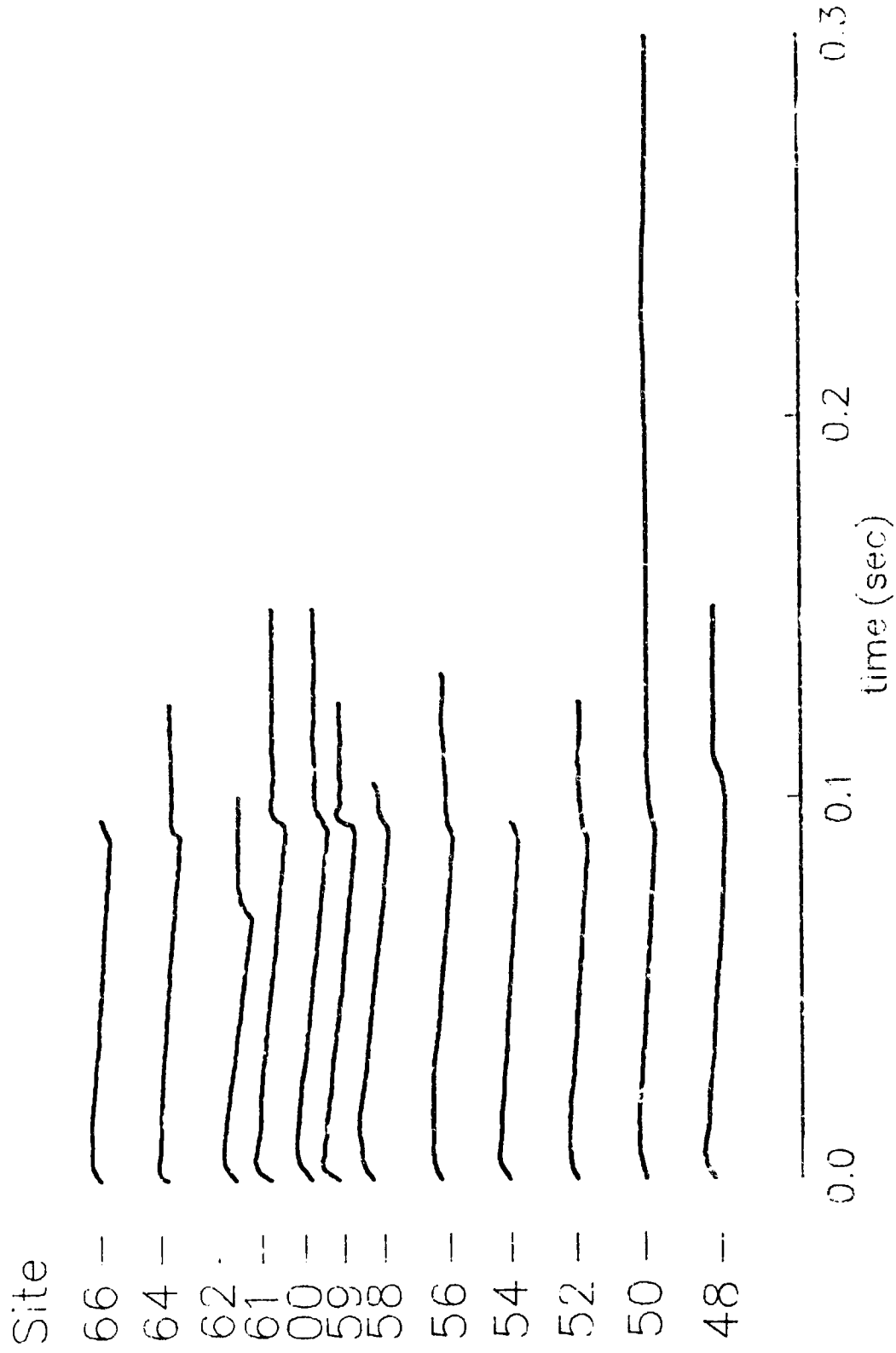


Figure D-11. AT--38 on 4 Aug 87 at 0719



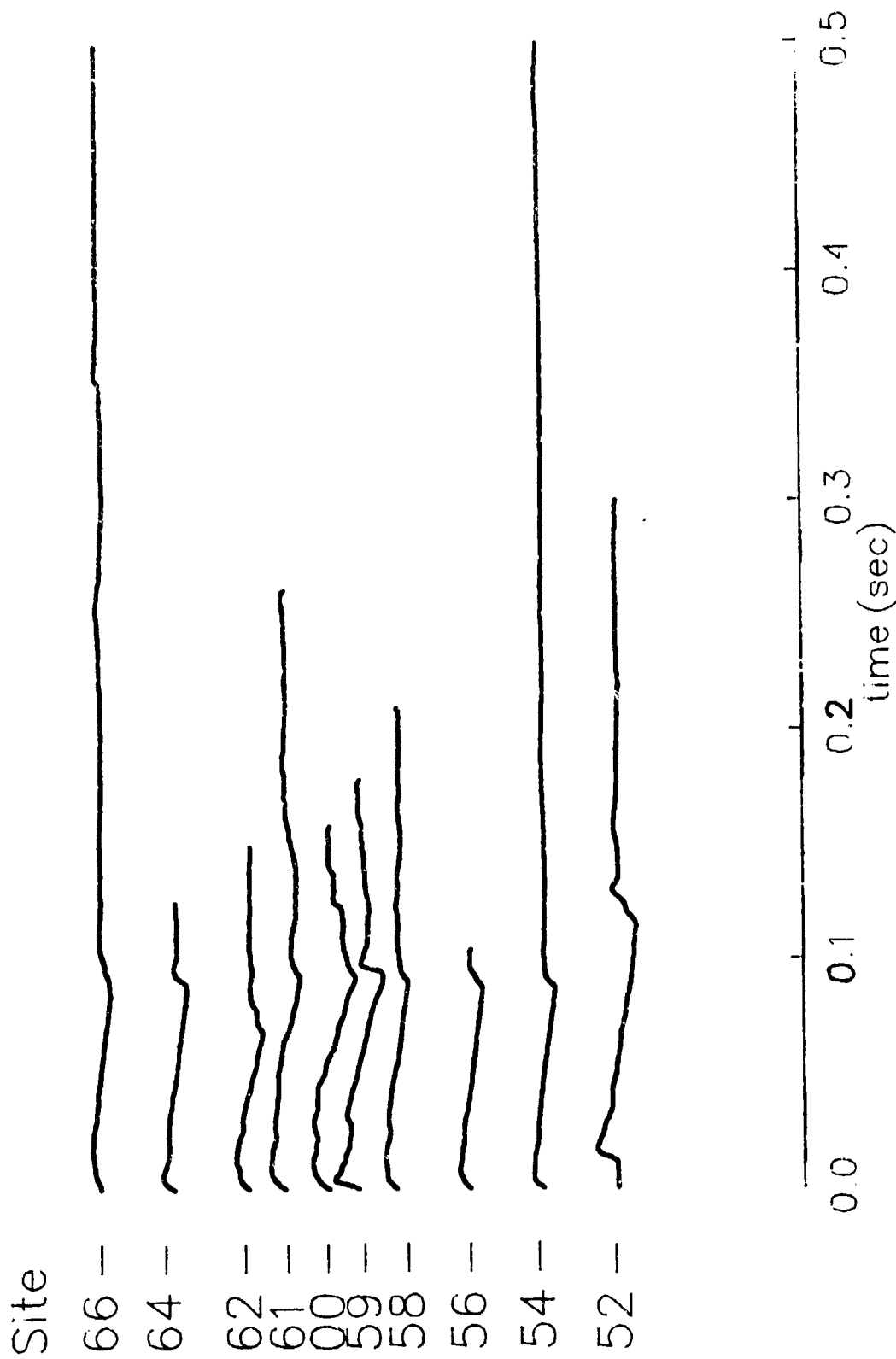


Figure D-12. AT-38 on 4 Aug 87 at 0730

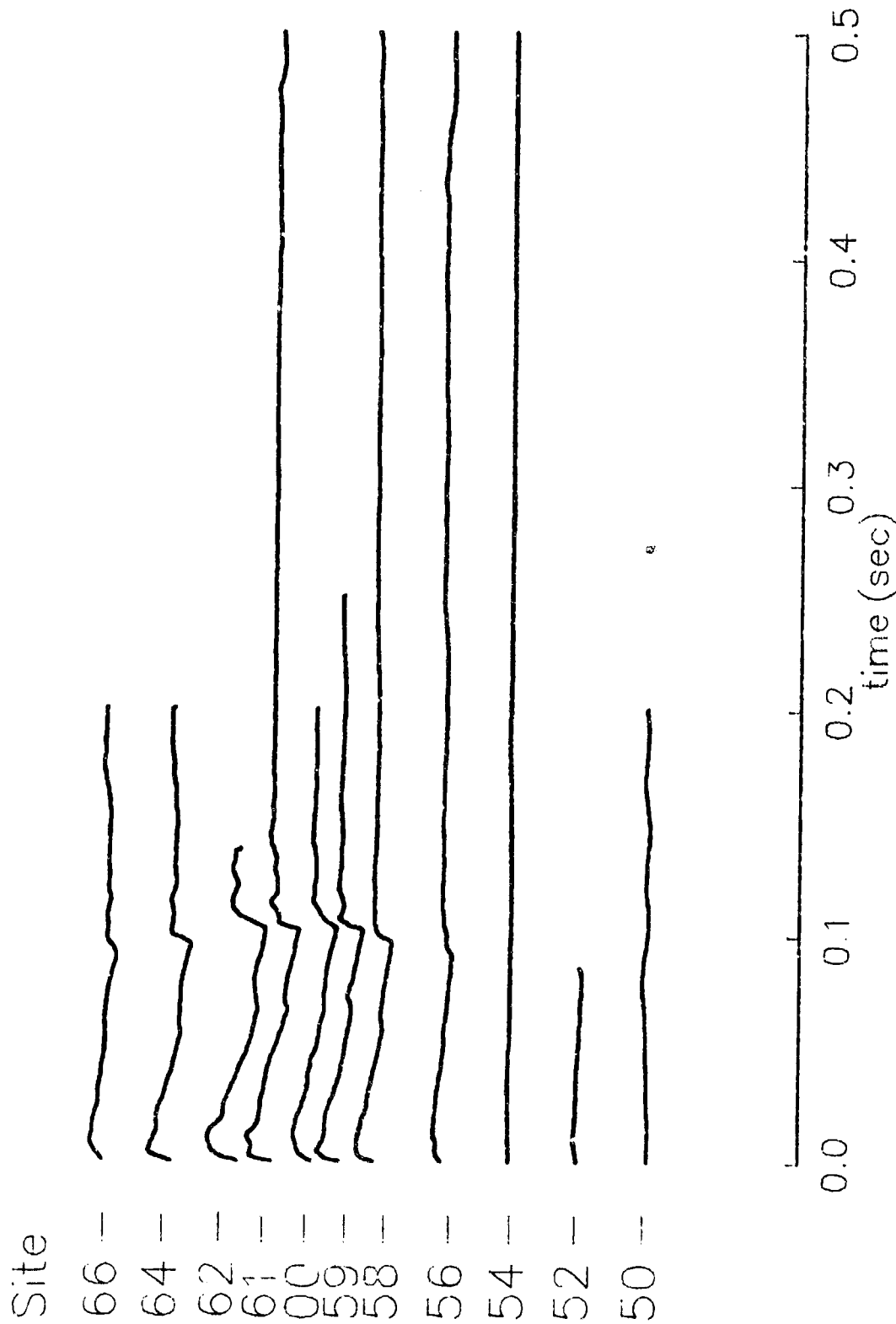


Figure D-13. AT-38 on 4 Aug 87 at 0736

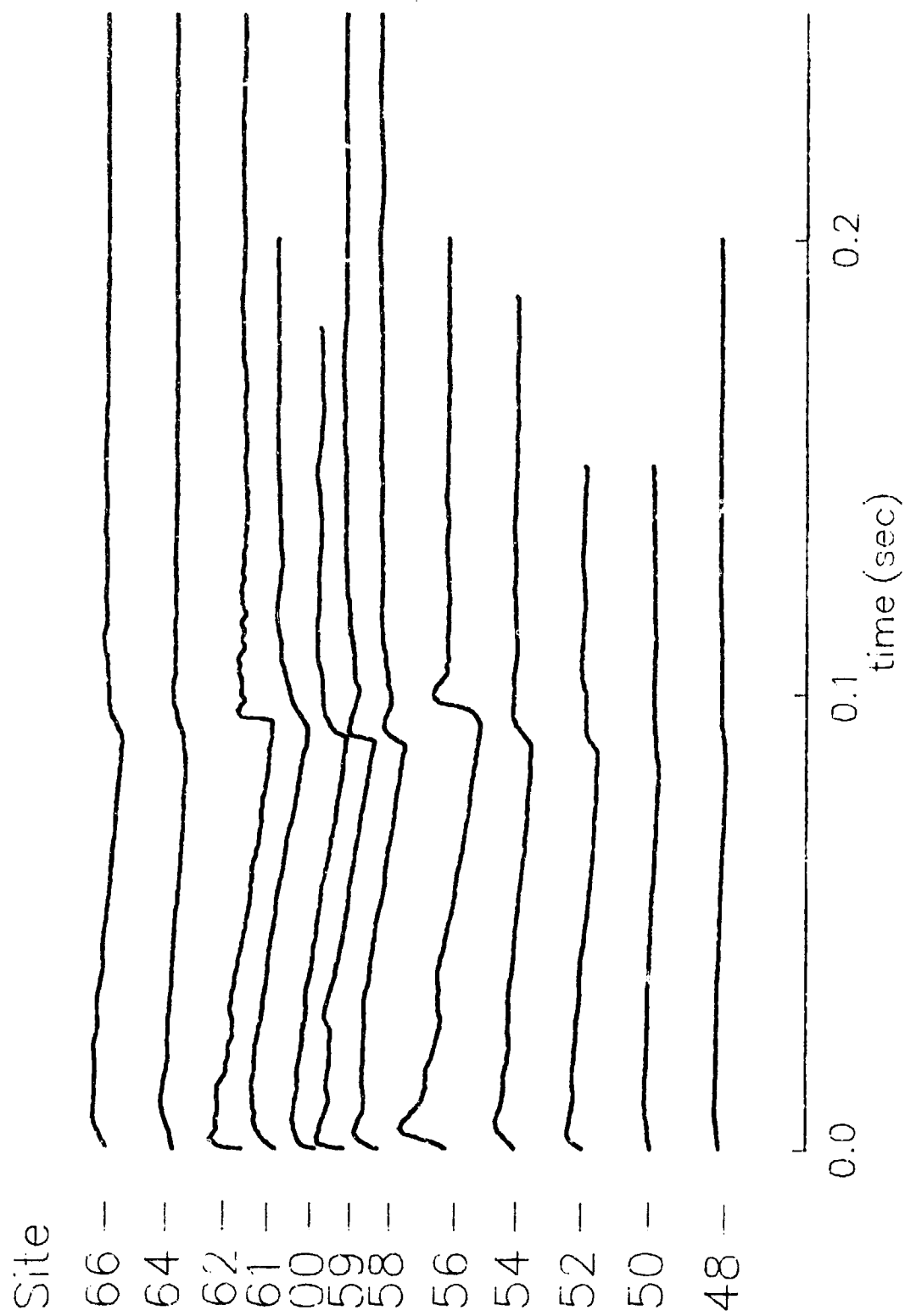


Figure D-14. AT-38 on 4 Aug 87 at 0914

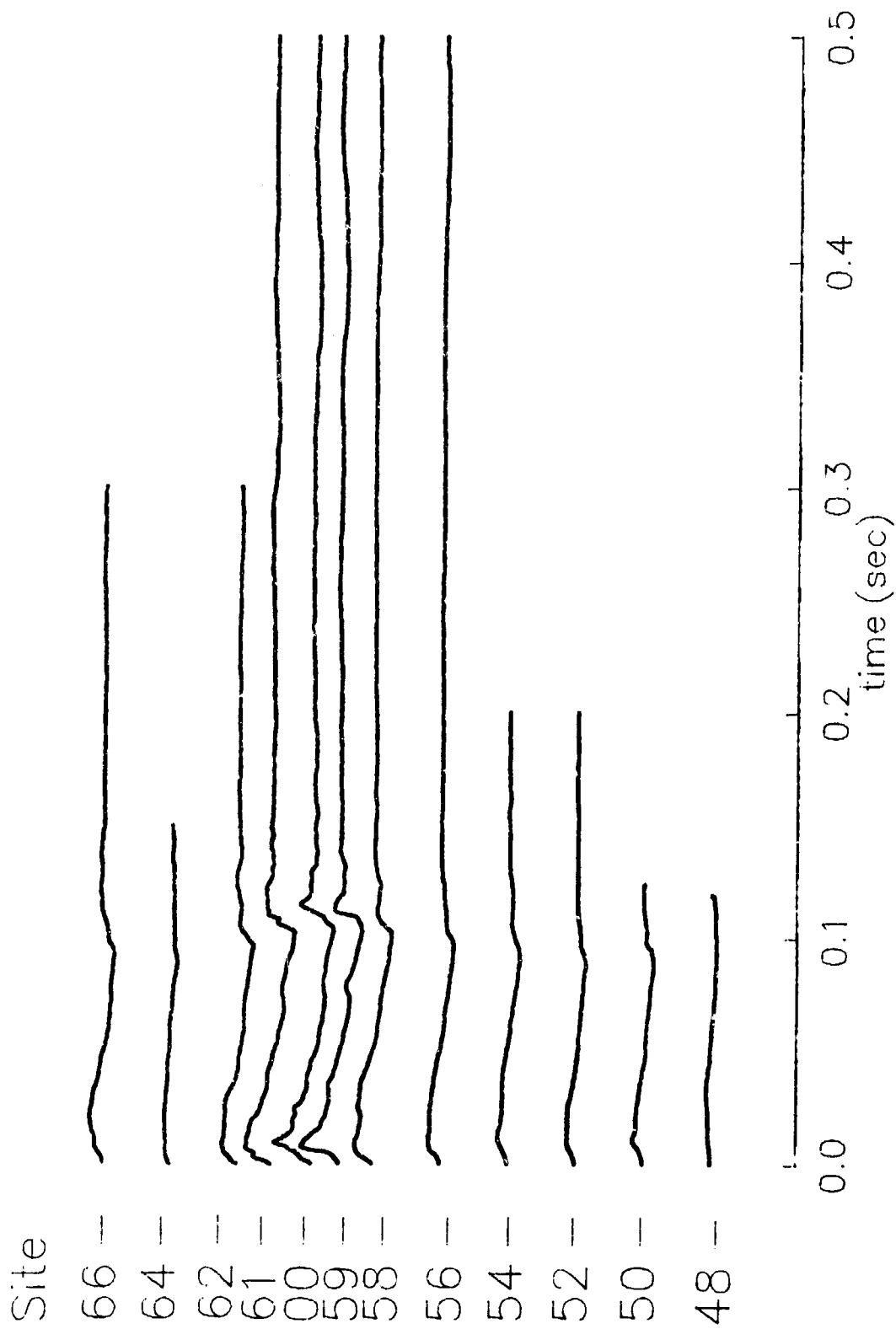


Figure D-15. AT-38 on 4 Aug 87 at 0923

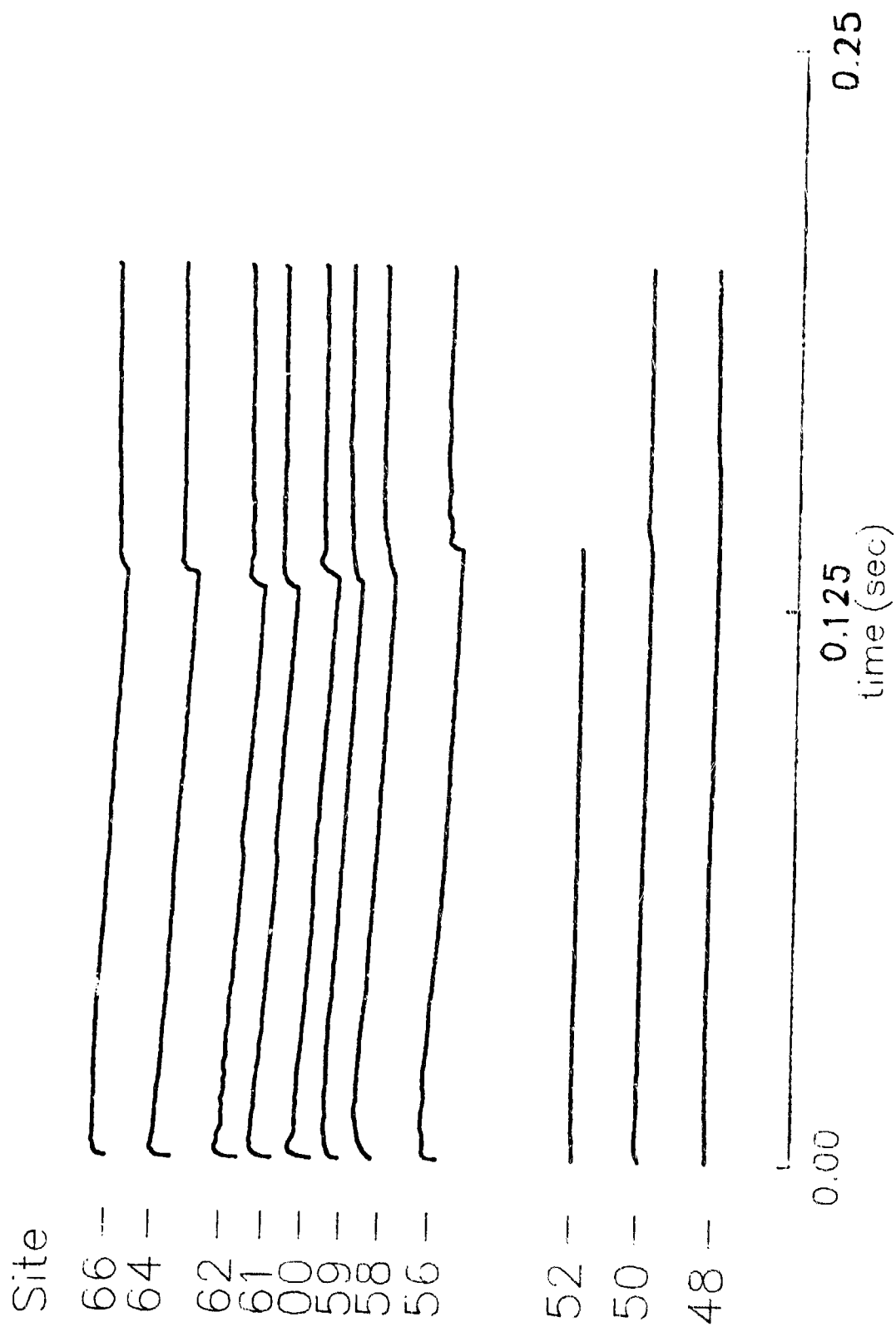


Figure D-16. F-15 on 4 Aug 87 at 0756

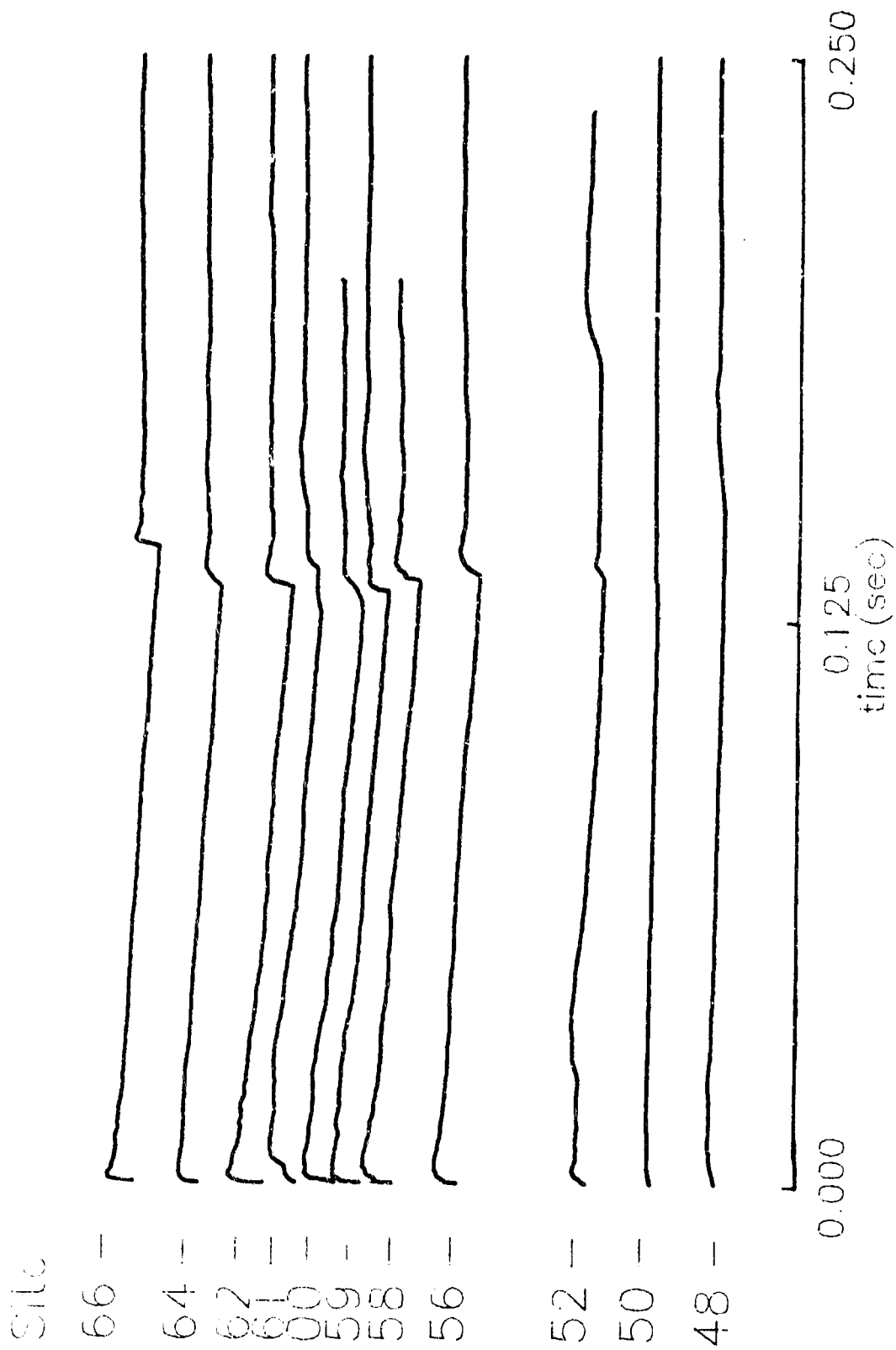


Figure D-17. F-15 on 4 Aug 87 at 0804

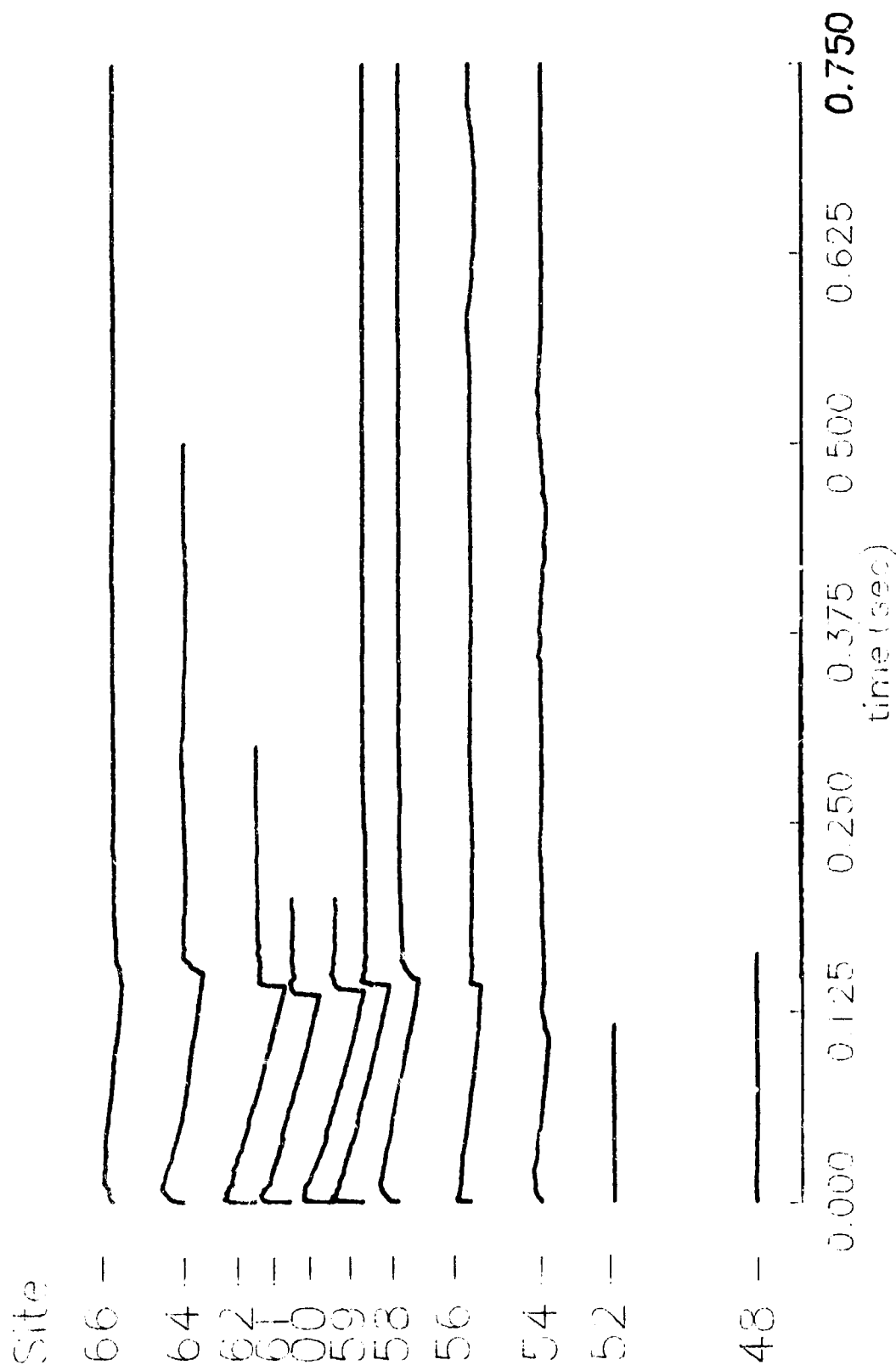


Figure D-18. F-15 on 4 Aug 87 at 0810

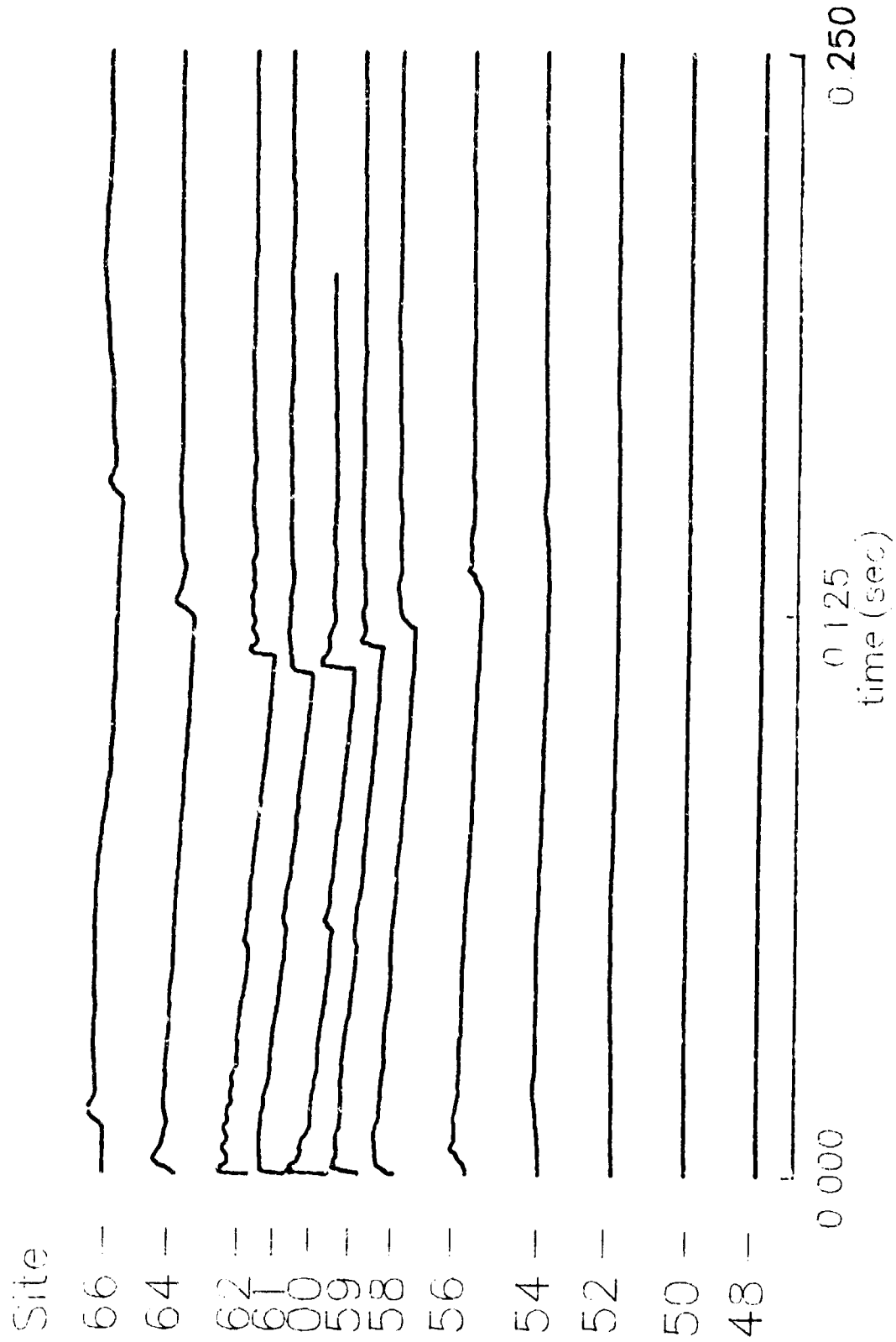


Figure D-19. F-15 on 4 Aug 87 at 1046



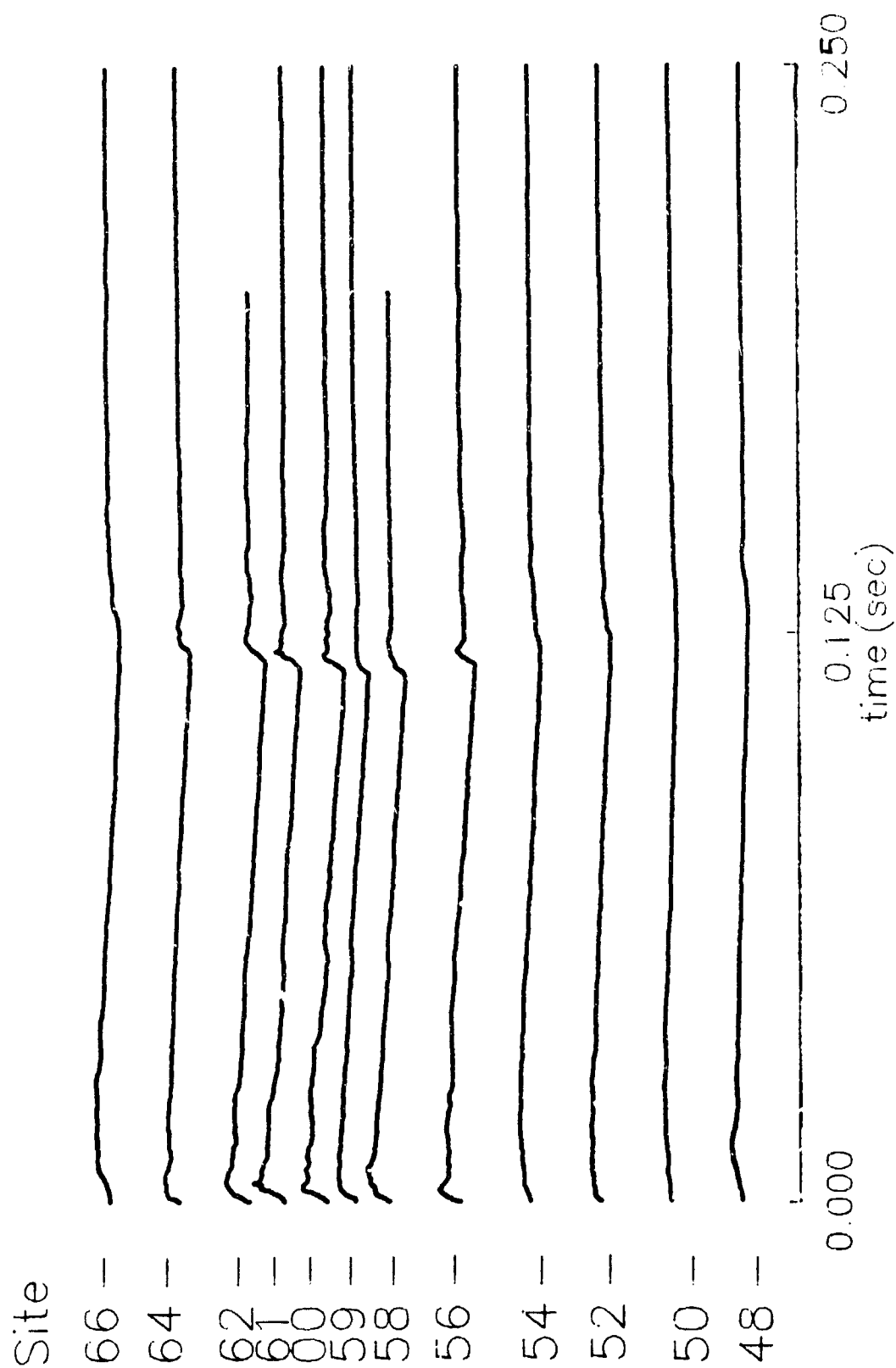


Figure D--20. F-15 on 4 Aug 87 at 1102

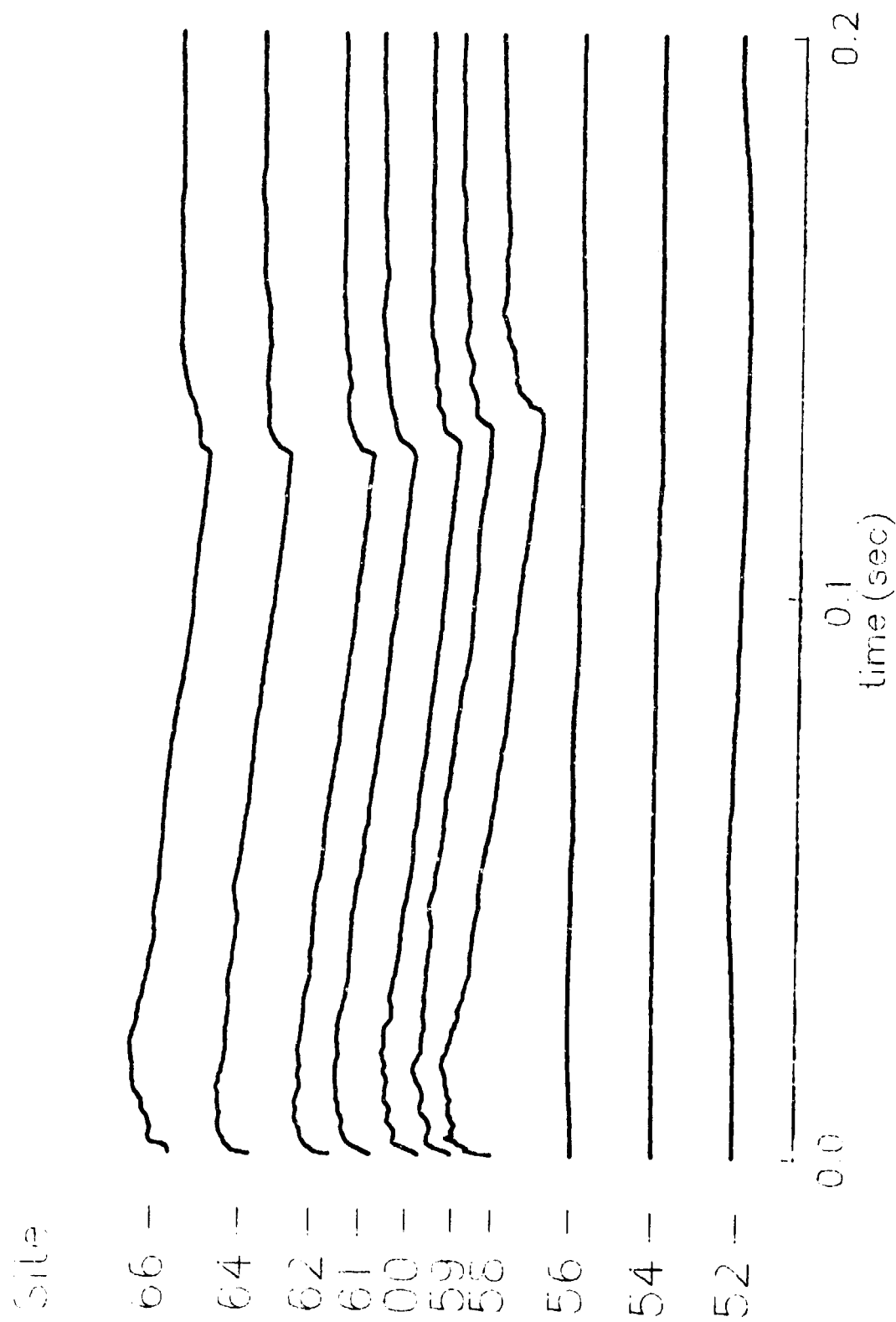


Figure D-21. F-15 on 4 Aug 87 at 1111

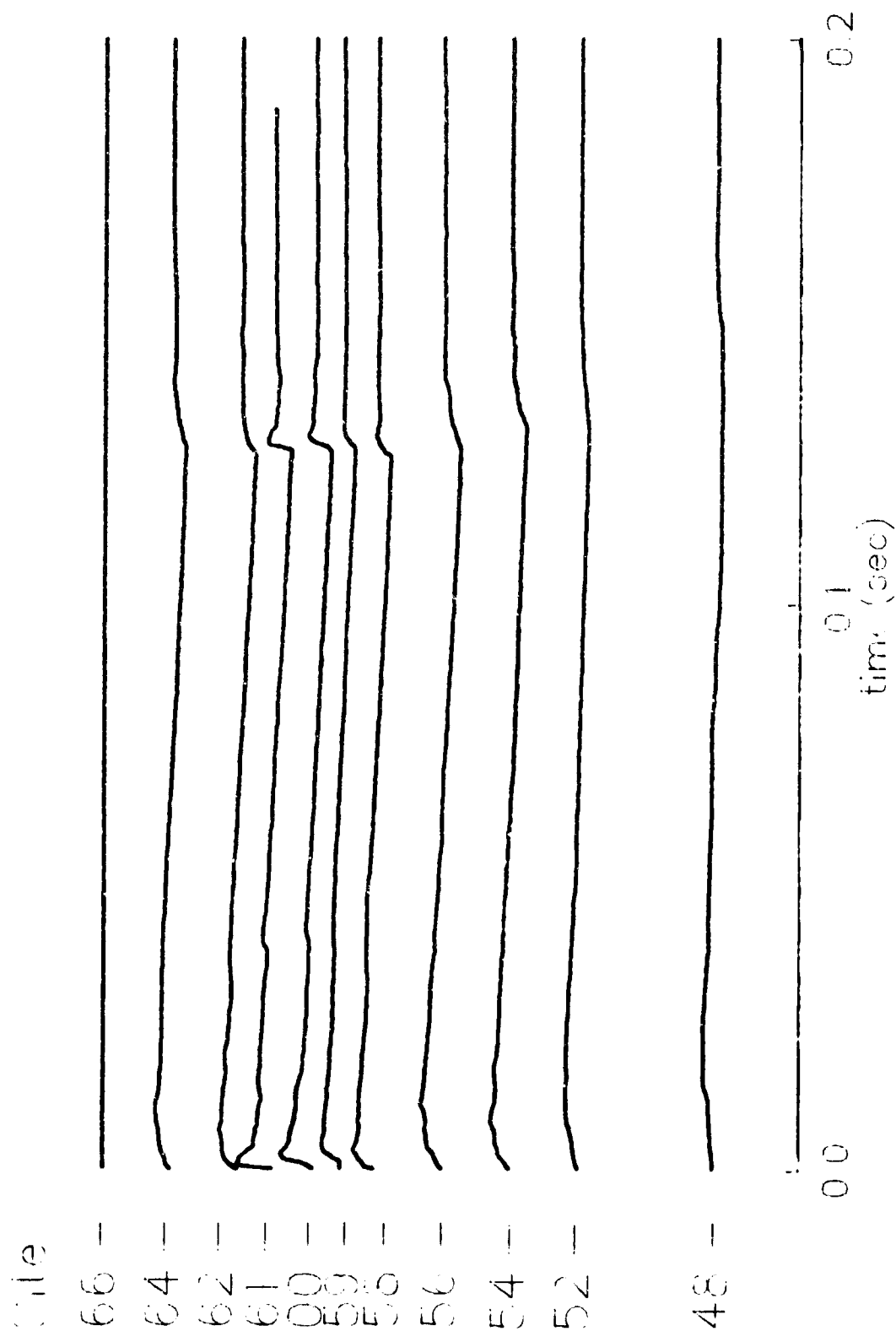


Figure D-22. F-15 on 4 Aug 87 at 1134

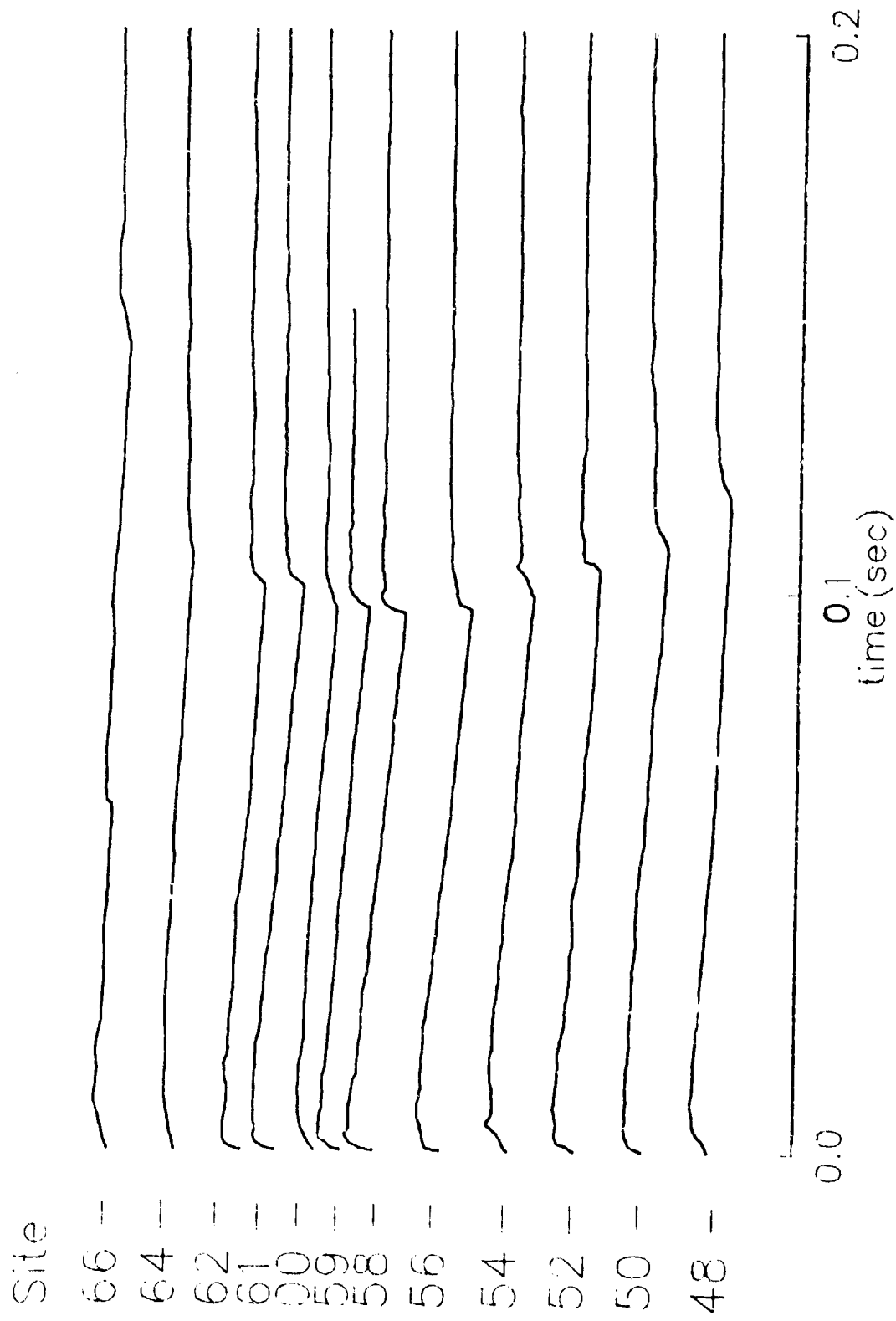


Figure D-23. F-16 on 5 Aug 87 at 0906

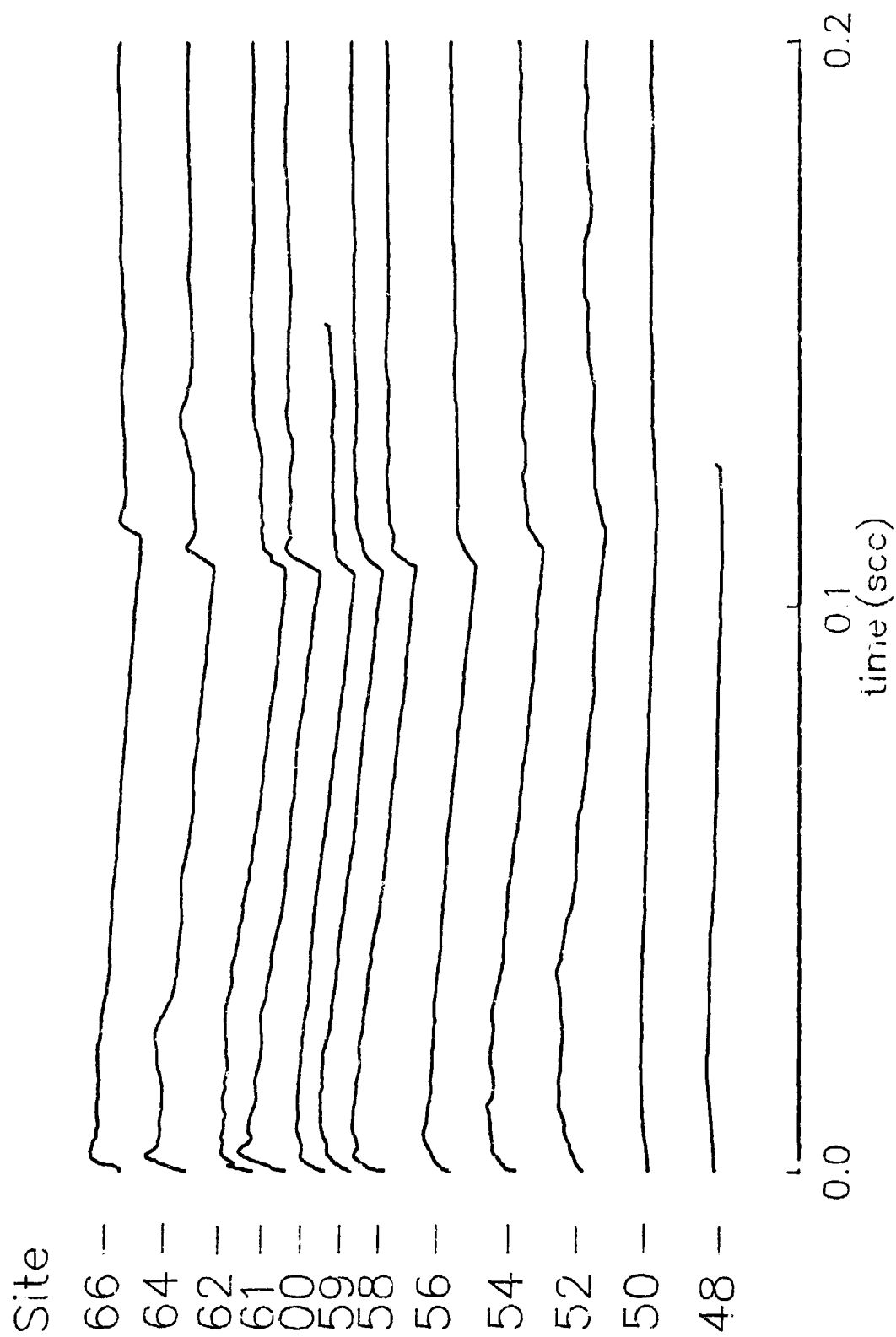


Figure D-24. F-16 on 5 Aug 87 at 0933

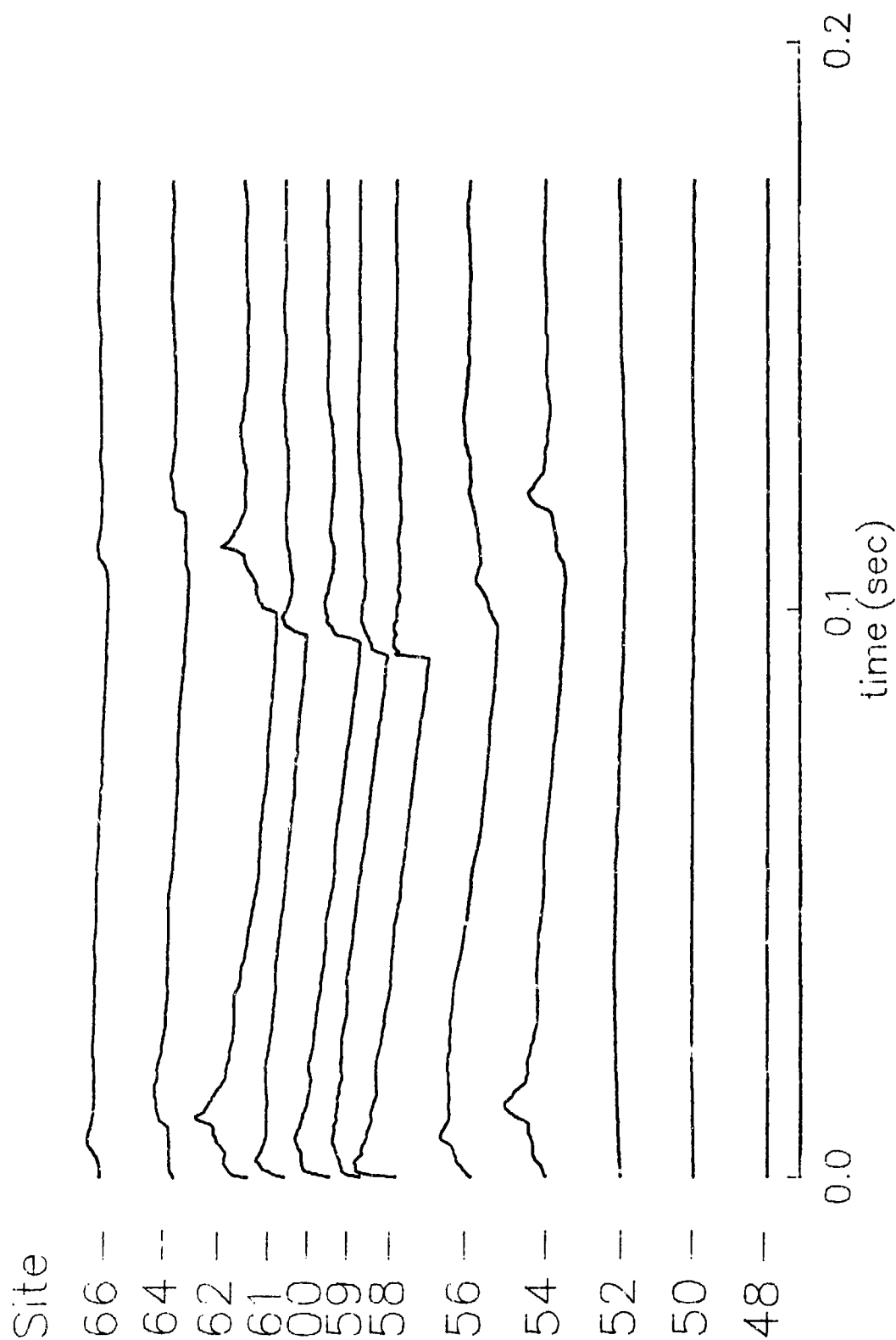


Figure D-25. F-16 on 5 Aug 87 at 0944

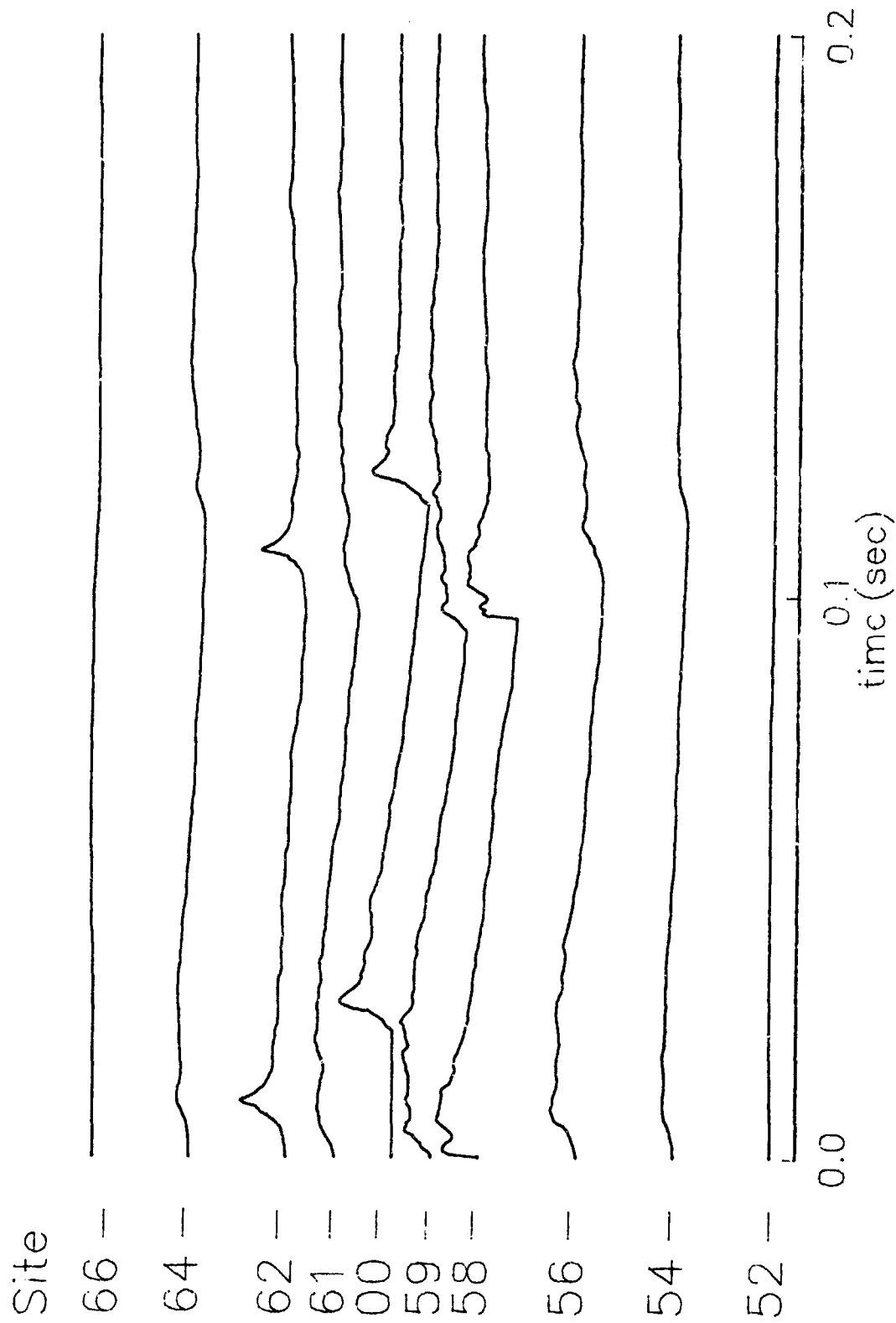


Figure D-26. F-16 on 5 Aug 87 at 11 44

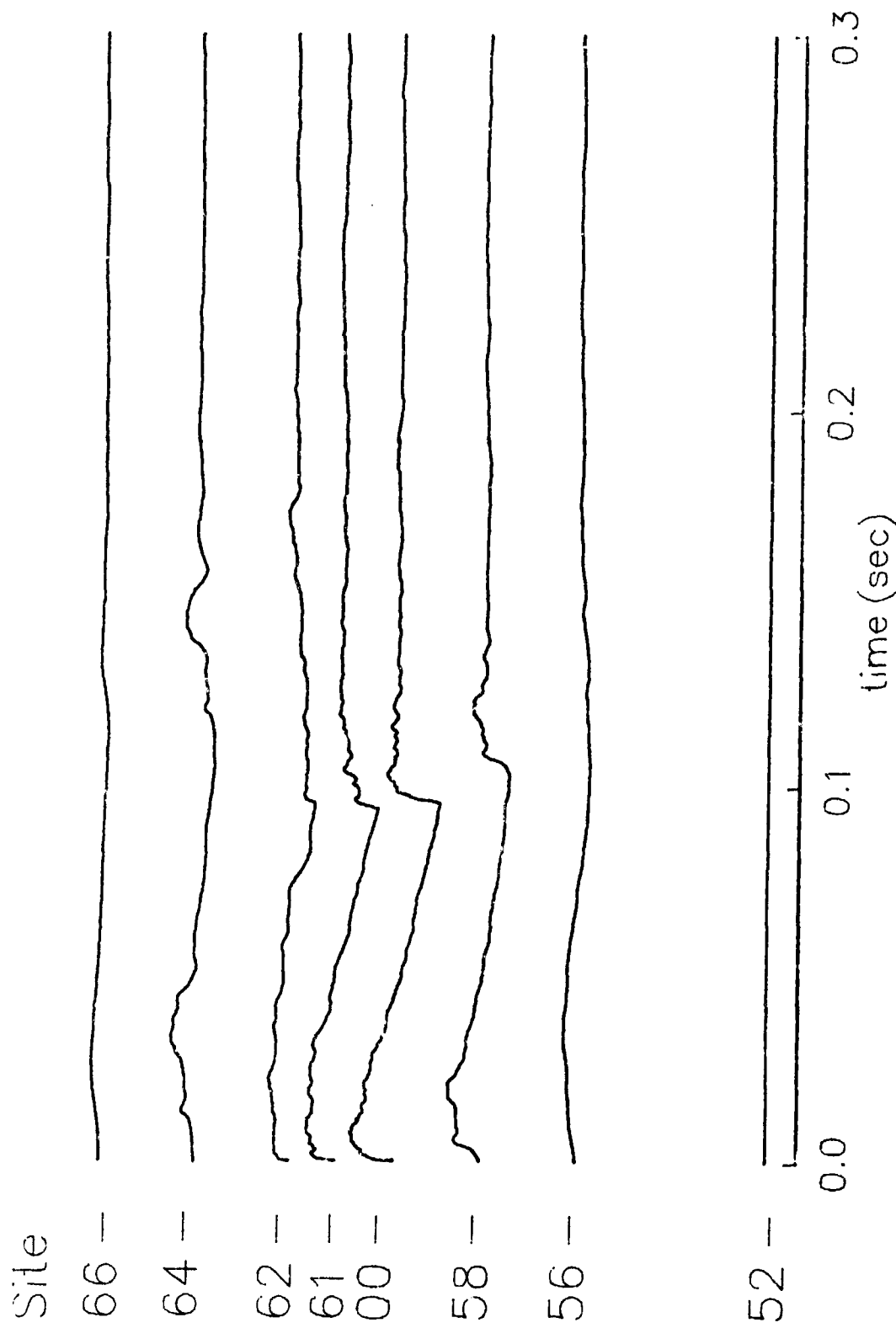


Figure D-27. F-16 on 5 Aug 87 at 1154



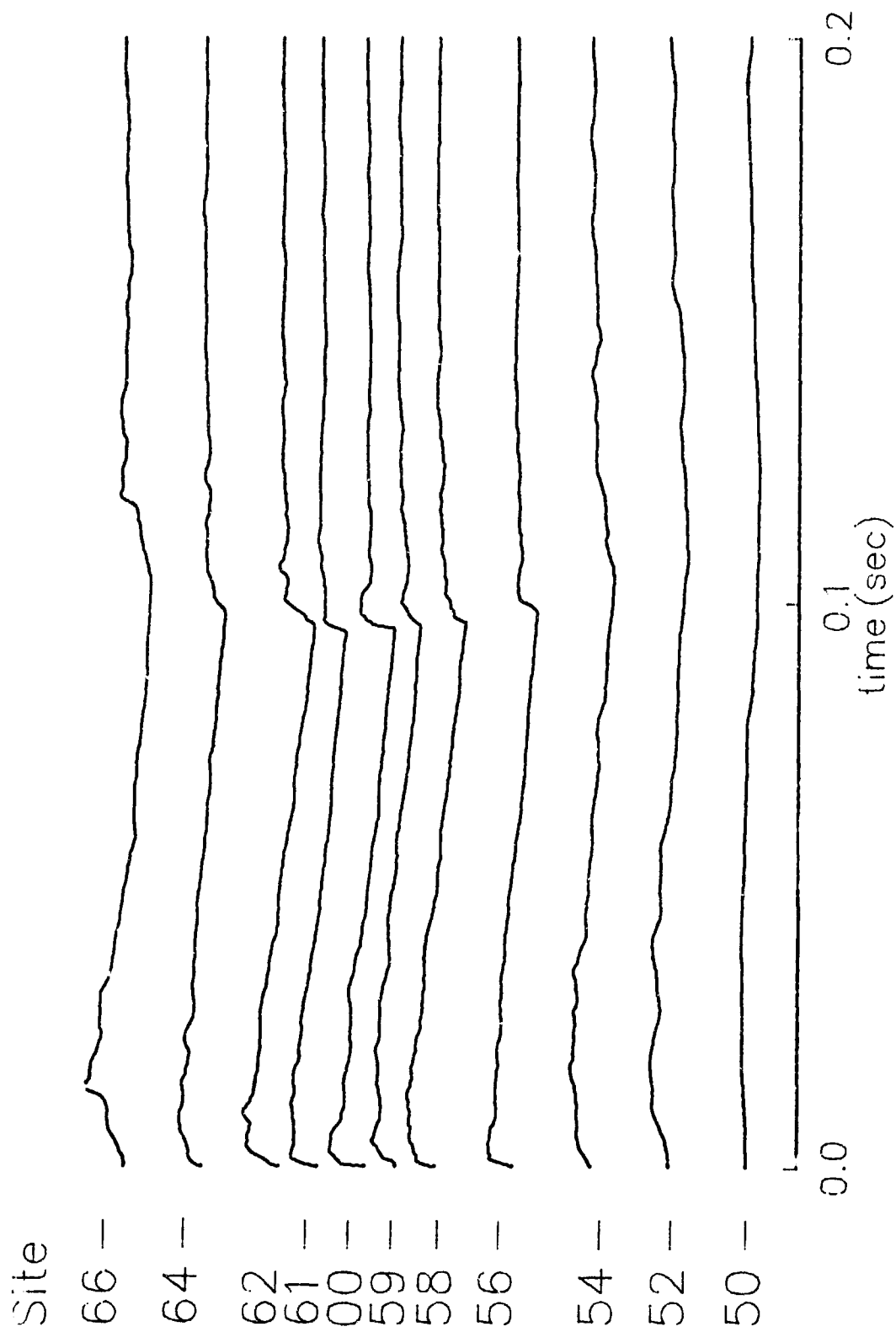


Figure D-28. F-16 on 5 Aug 87 at 1204

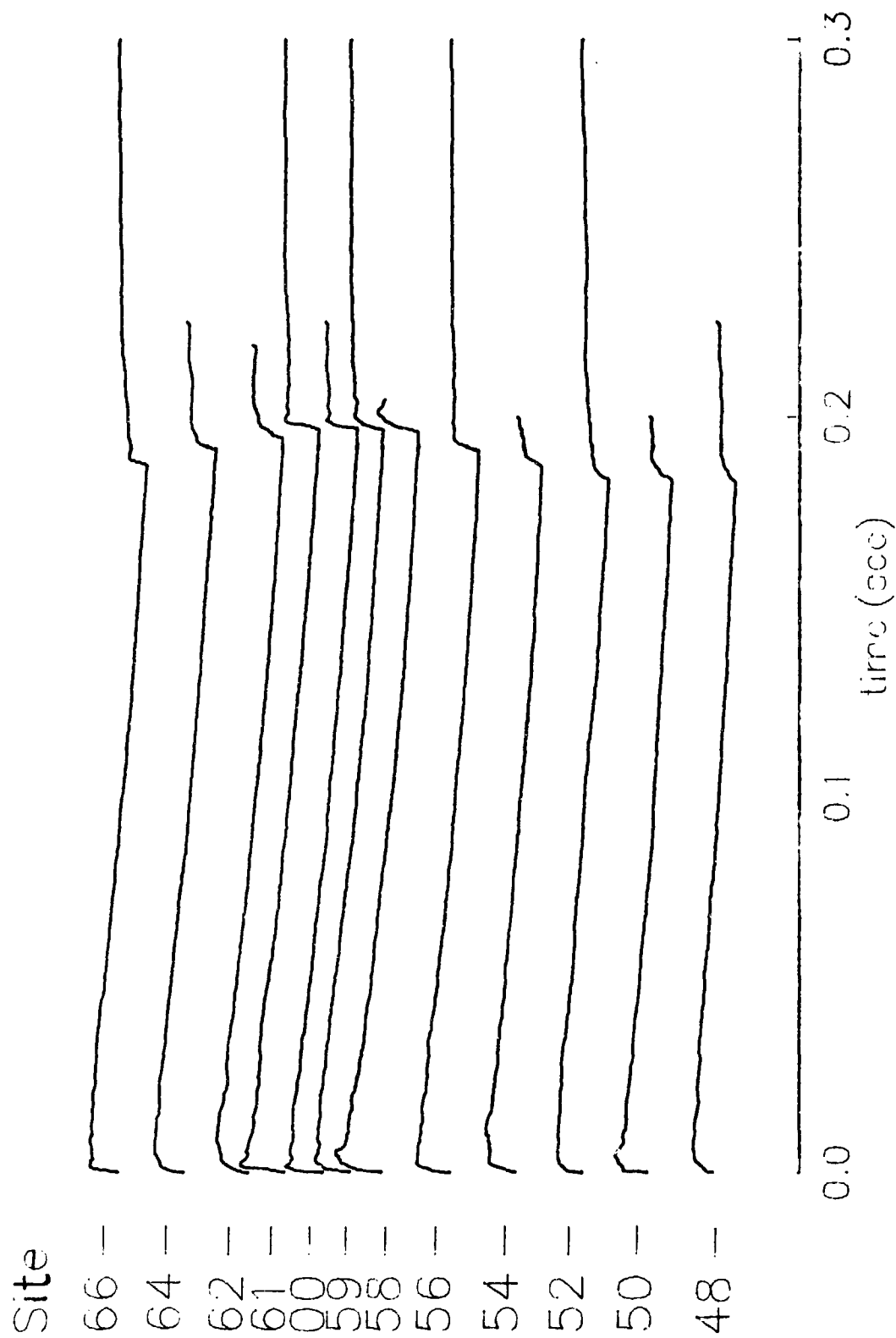


Figure D-29. SR-71 on 5 Aug 87 at 0926

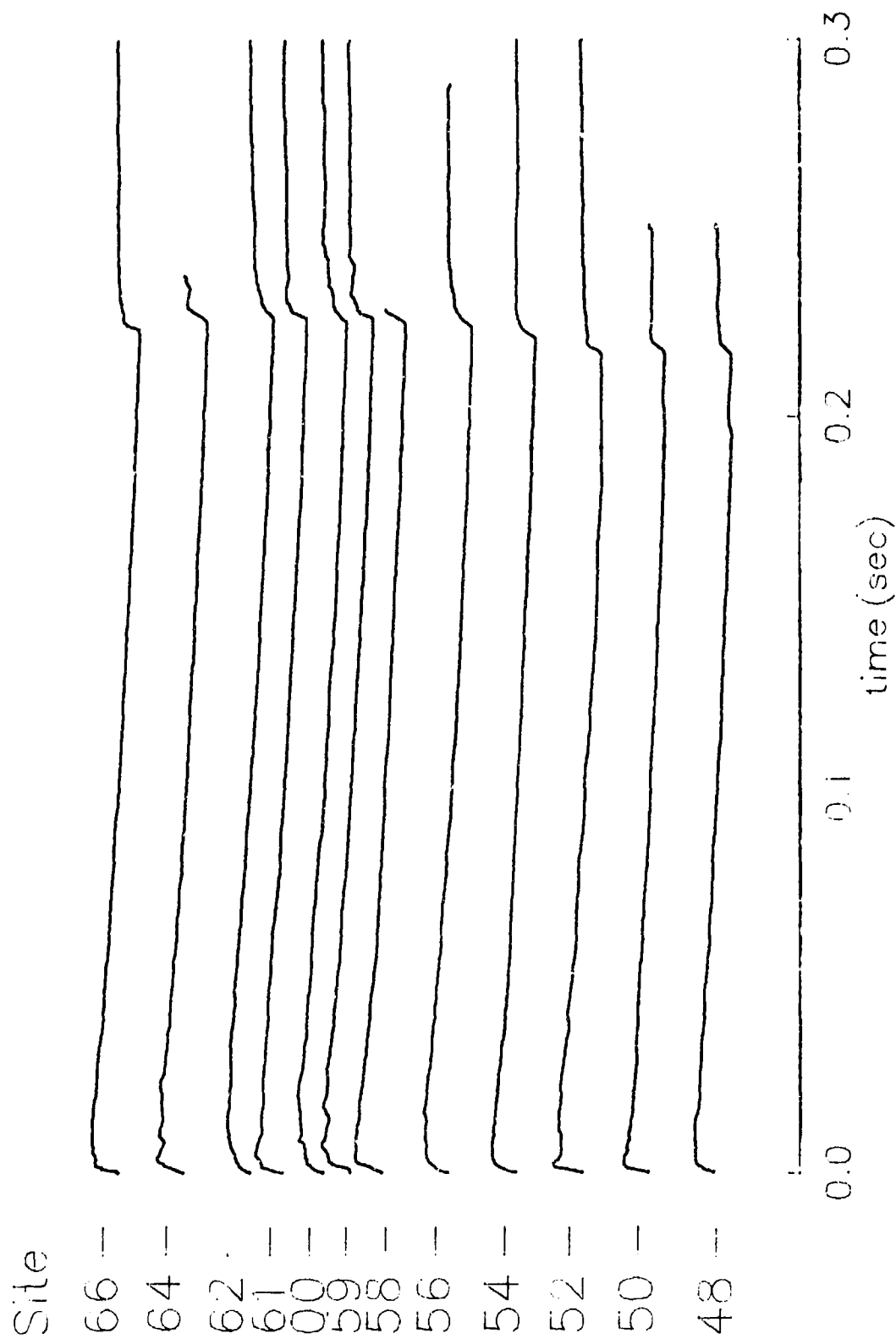


Figure D-30. SR-71 on 5 Aug 87 at 1055

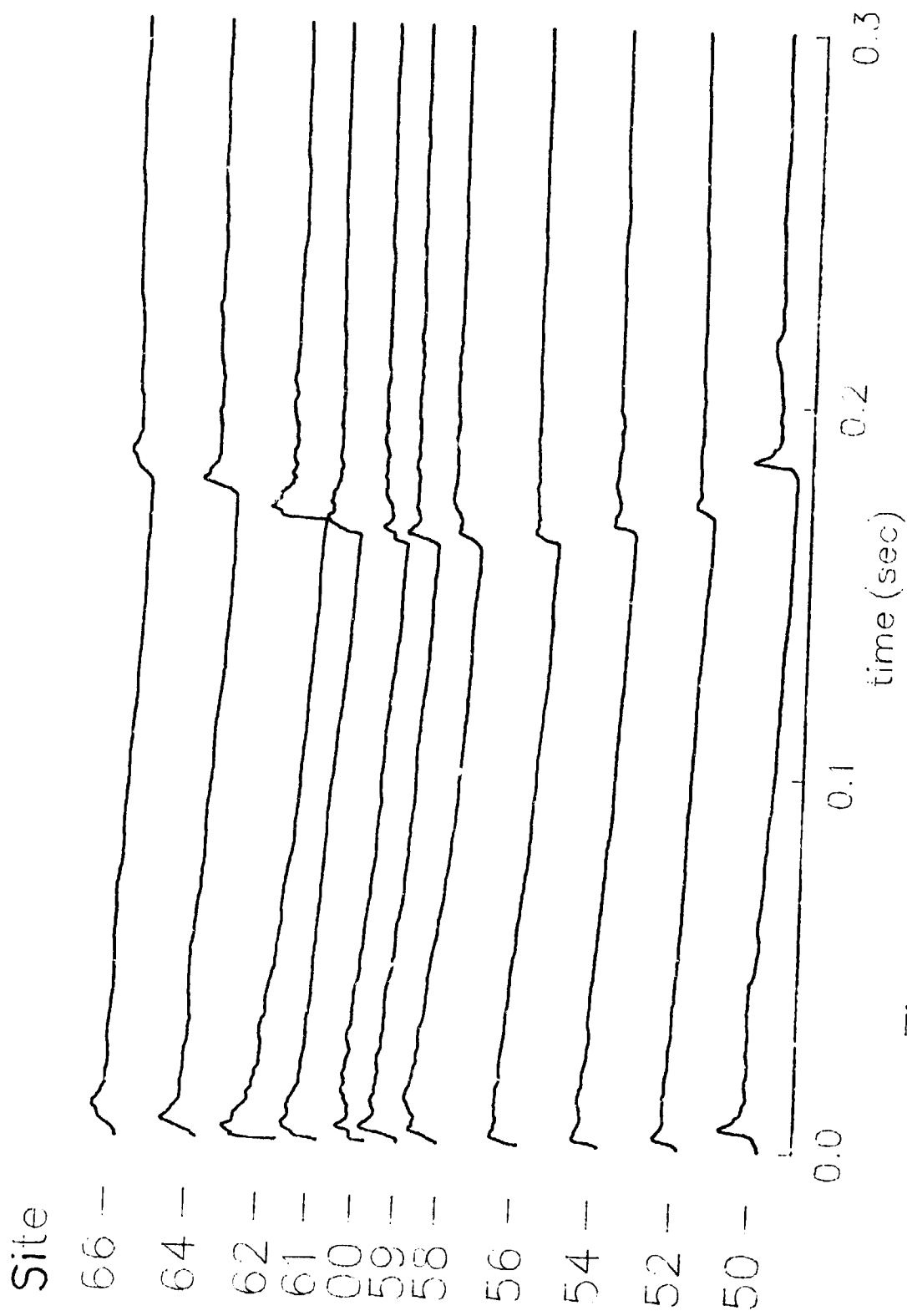


Figure D-31. SR-71 on 5 Aug 87 at 1108

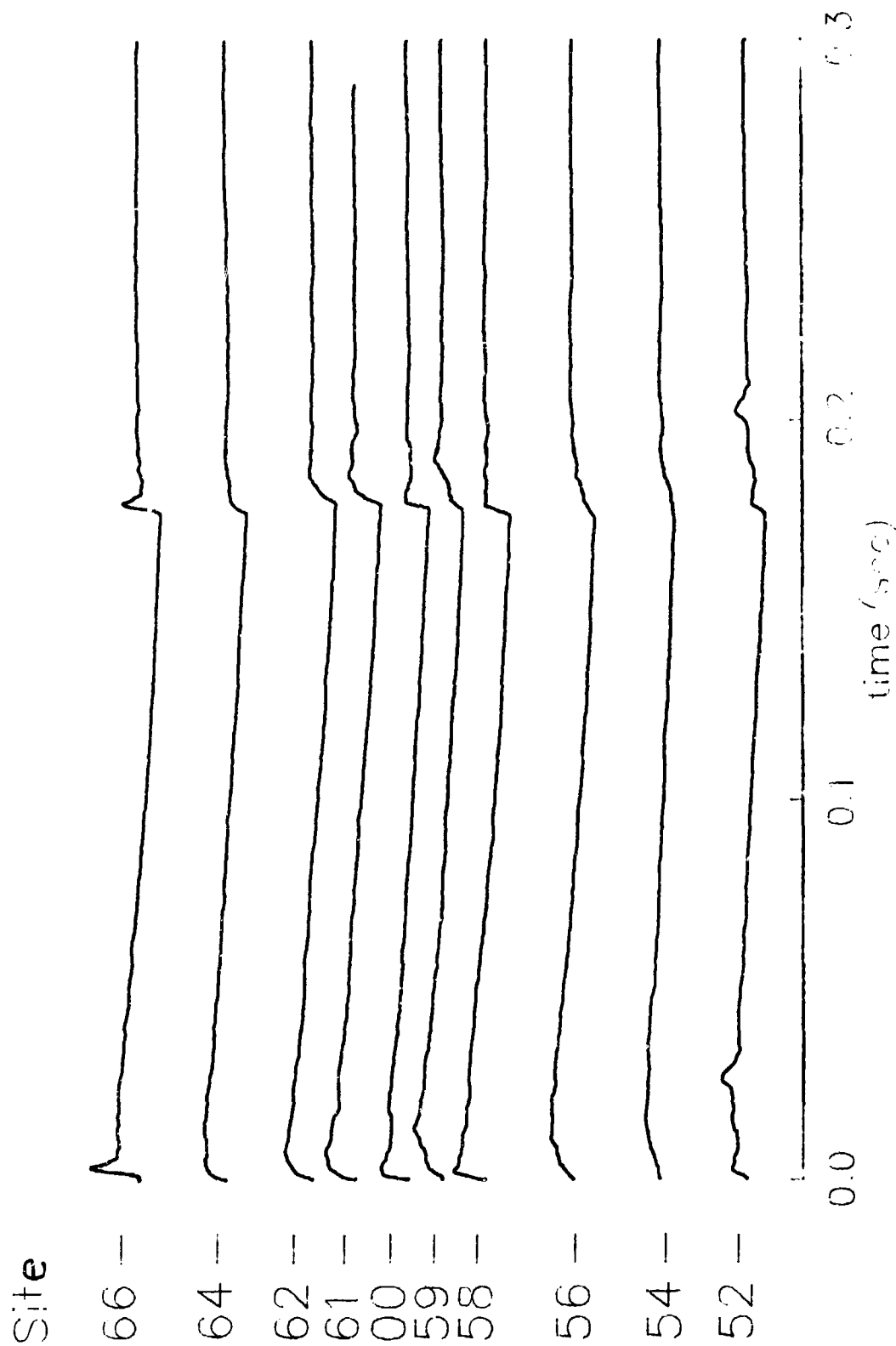


Figure D-32. SR-71 on 5 Aug 87 at 1235

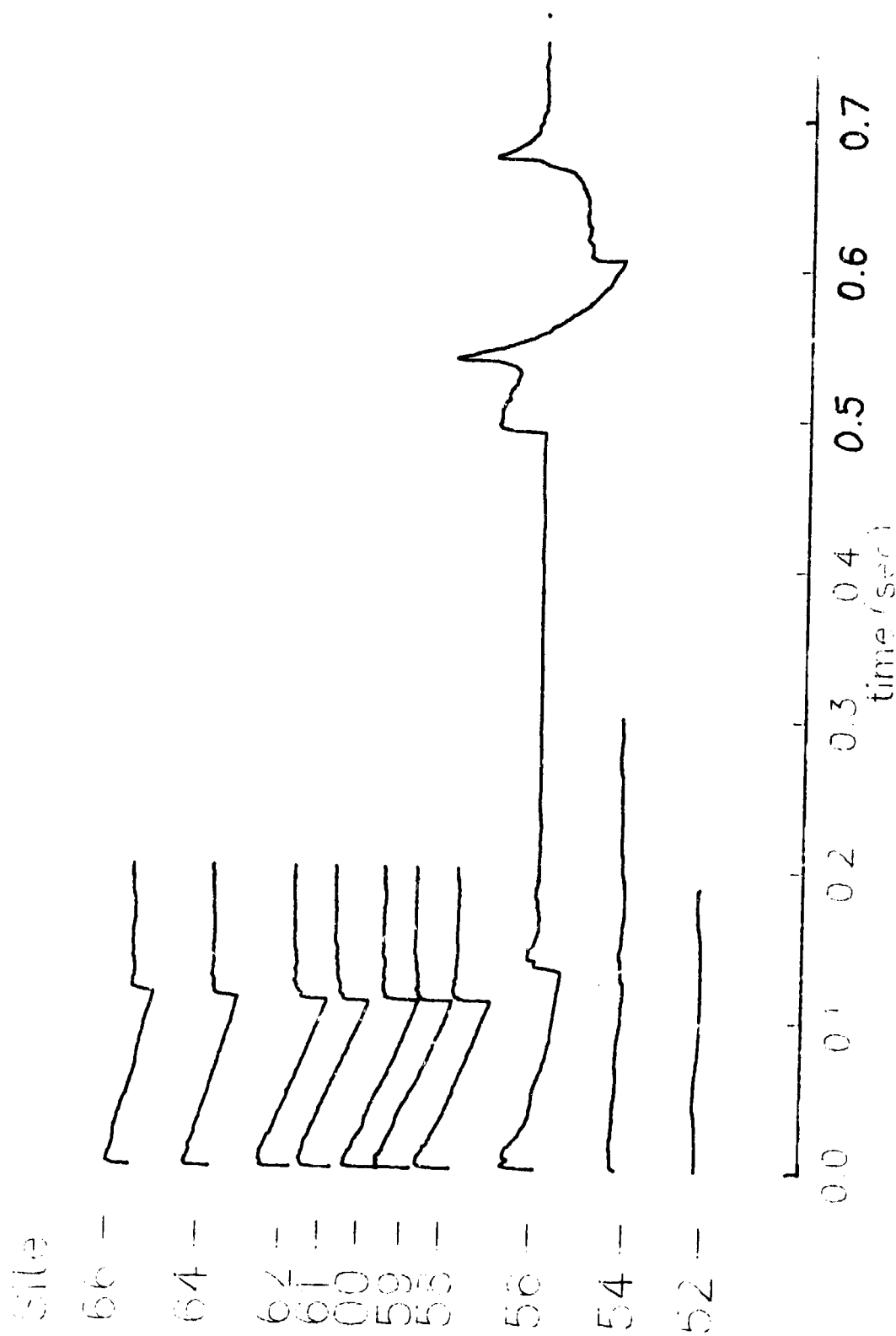


Figure D-33. F-1C on 6 Aug 87 at 0744

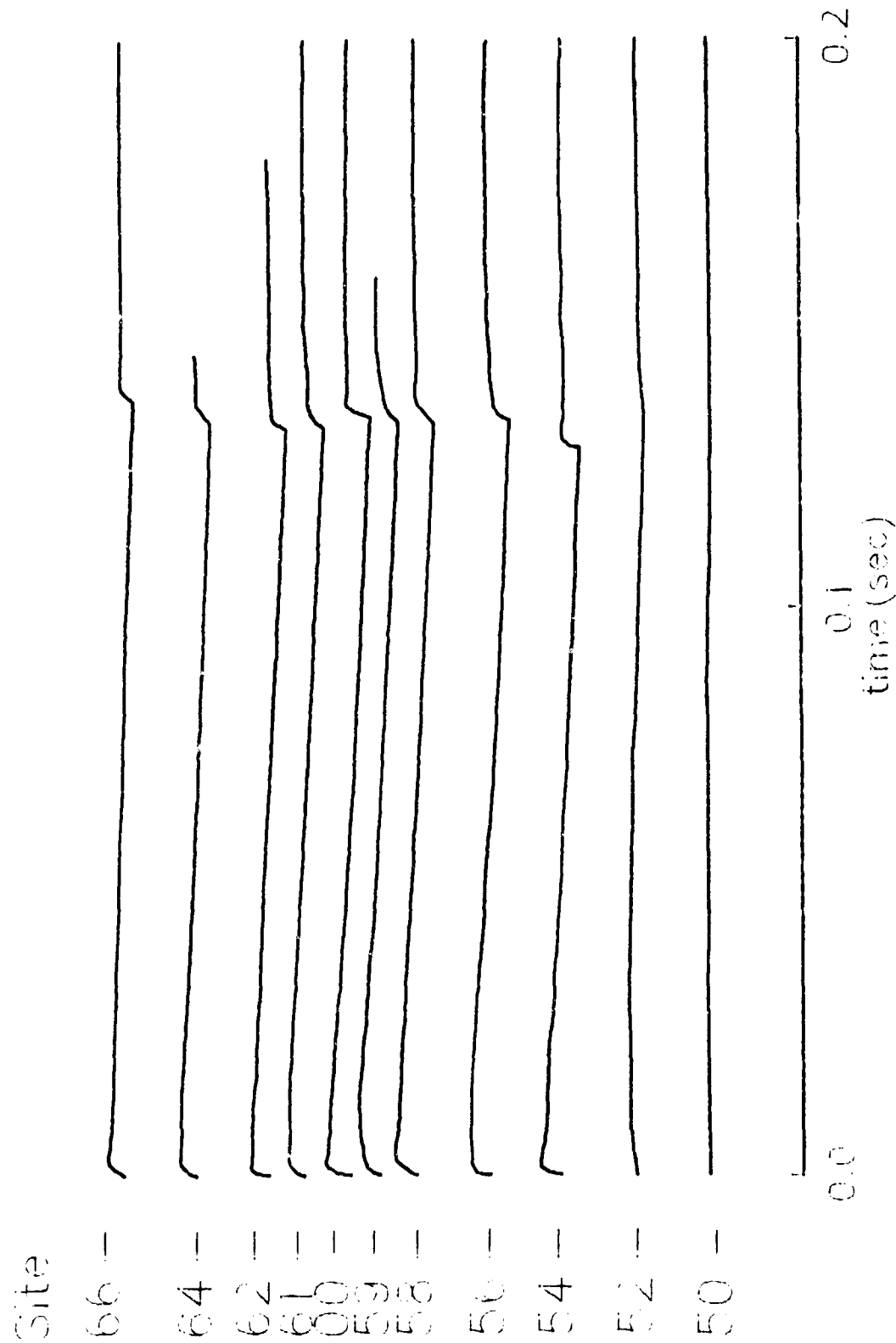


Figure D-34. F-18 on 6 Aug 87 at 0757

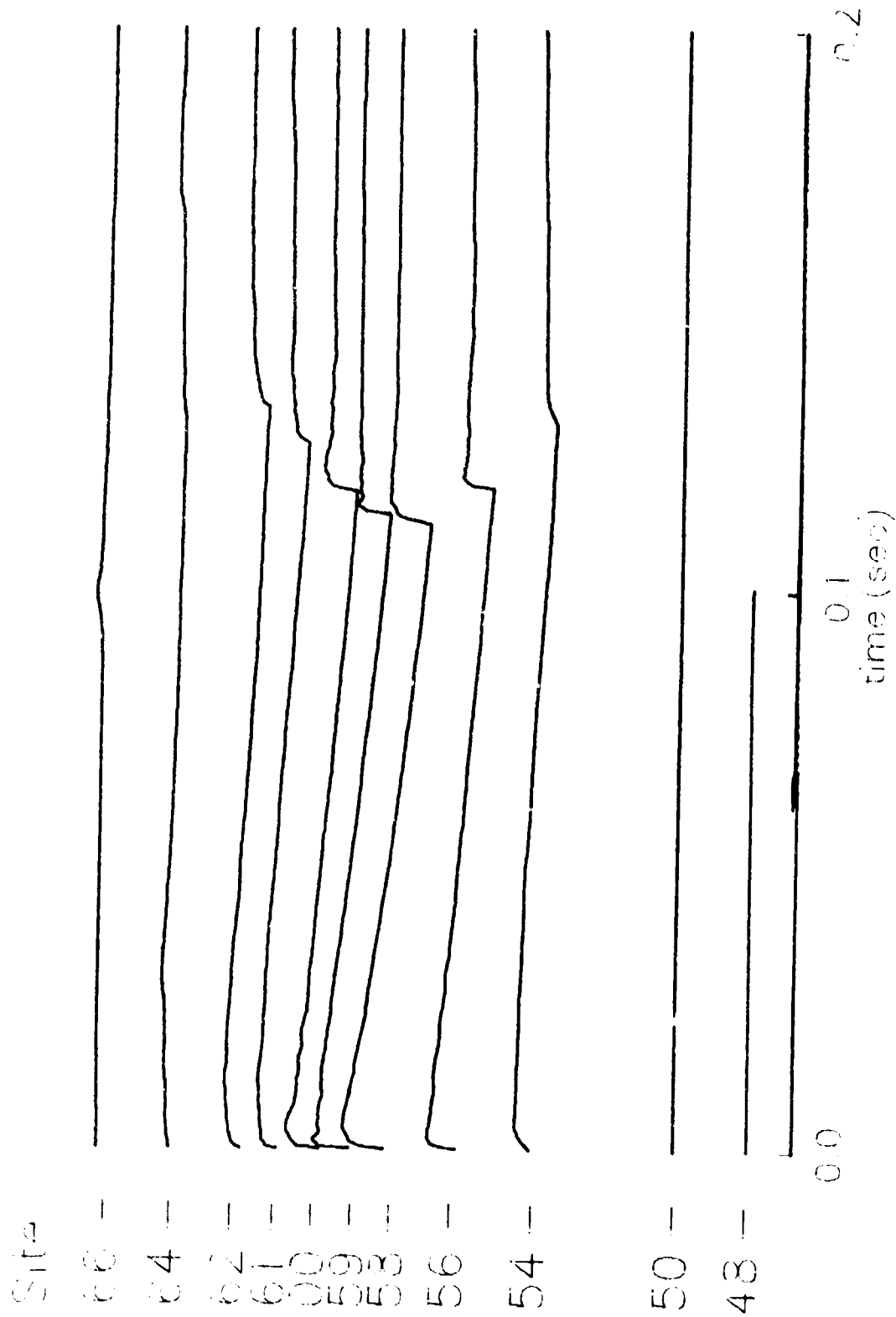


Figure D-35. F-18 on 6 Aug 87 at 0810



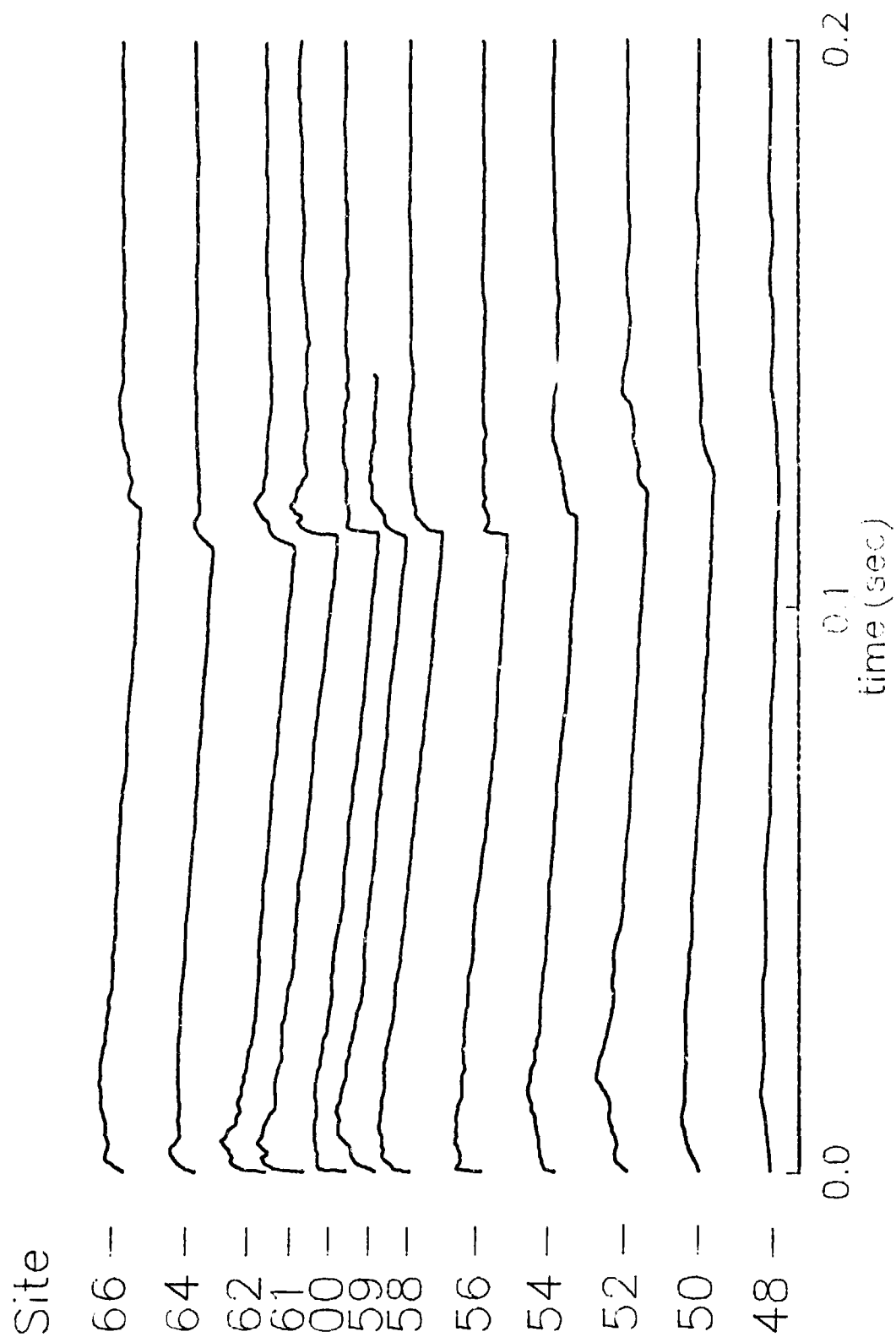


Figure D-36. F-18 on 6 Aug 87 at 1022

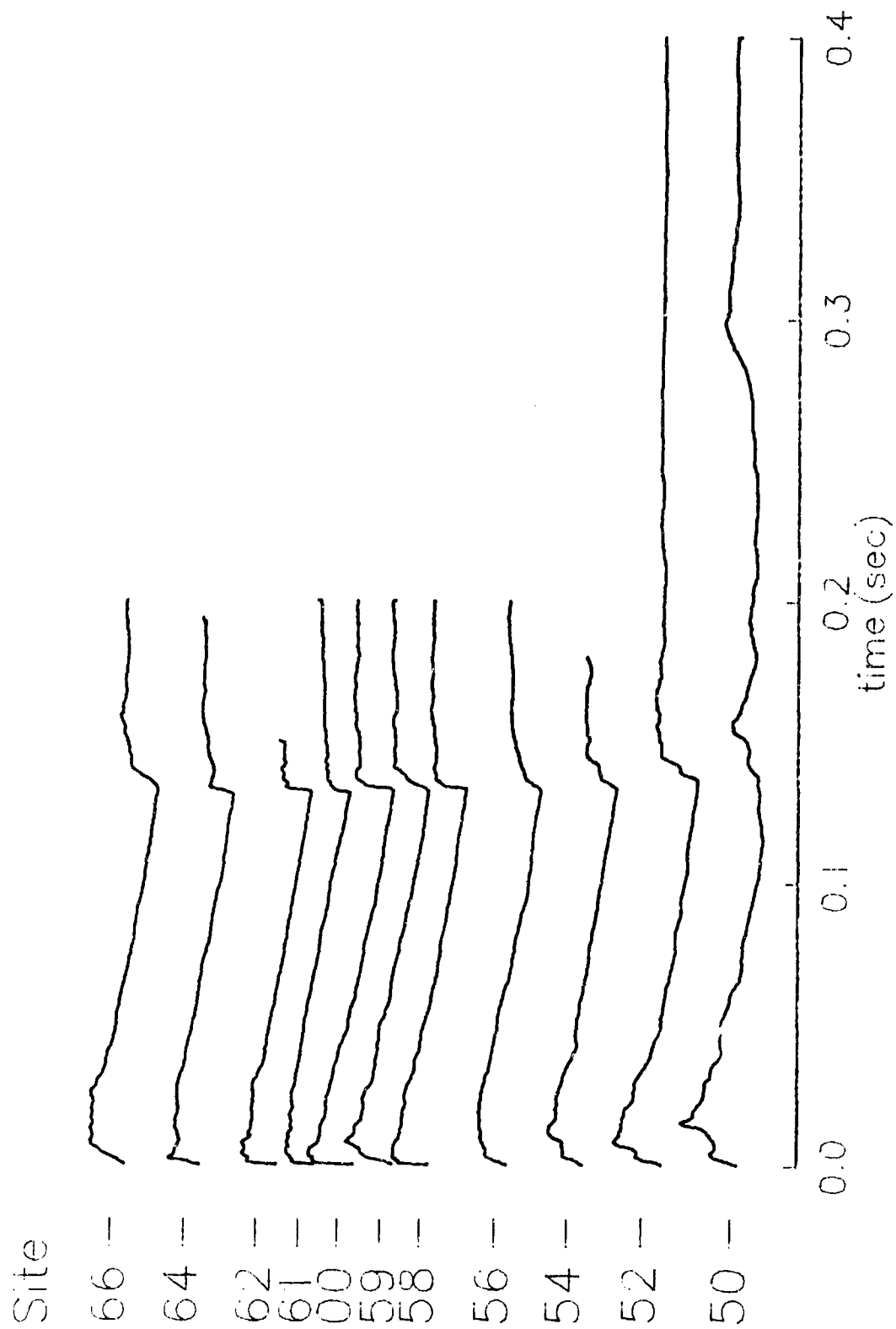


Figure D-37. F-18 on 6 Aug 87 at 1034

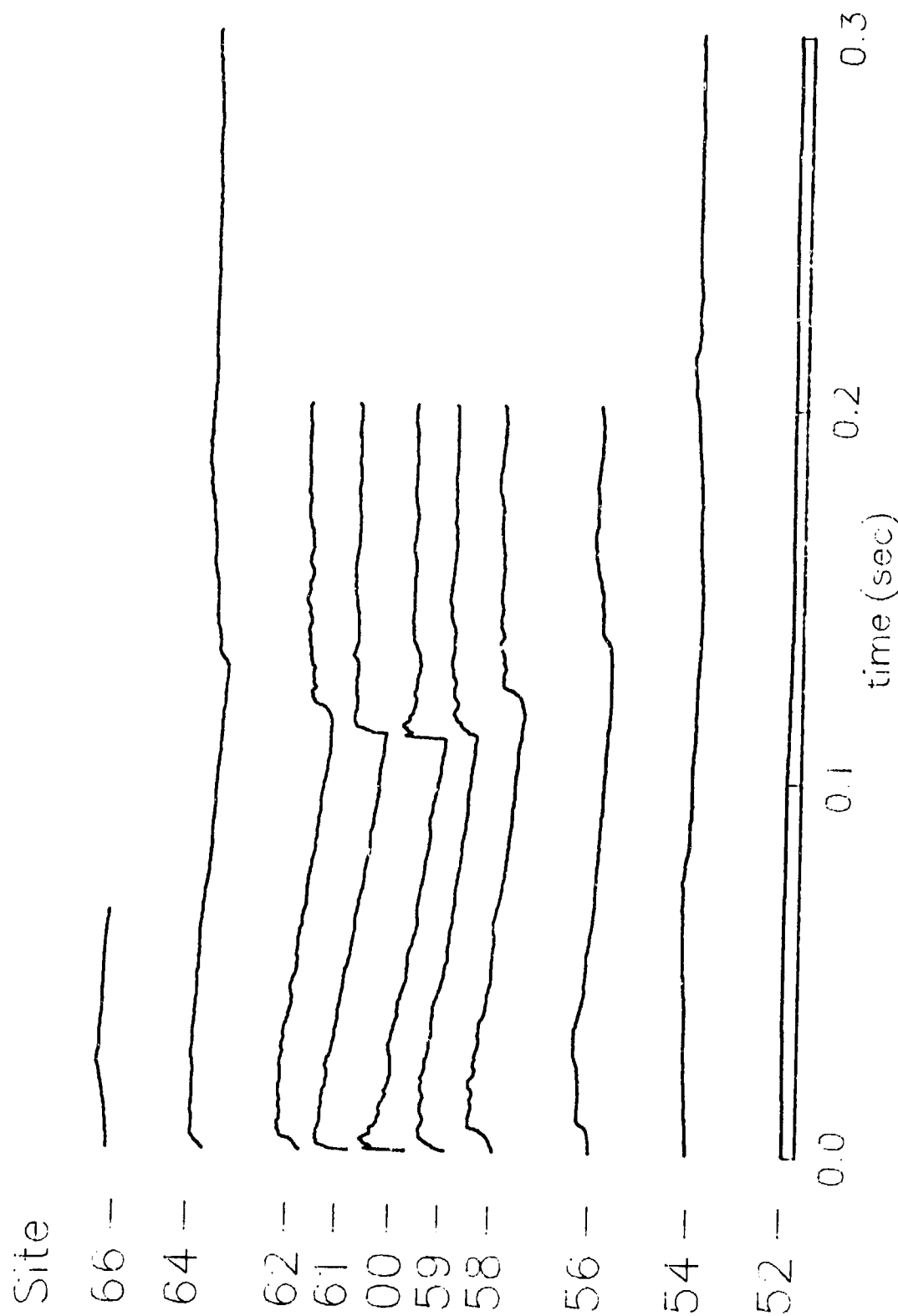


Figure D-38. F-18 on 6 Aug 87 at 1048

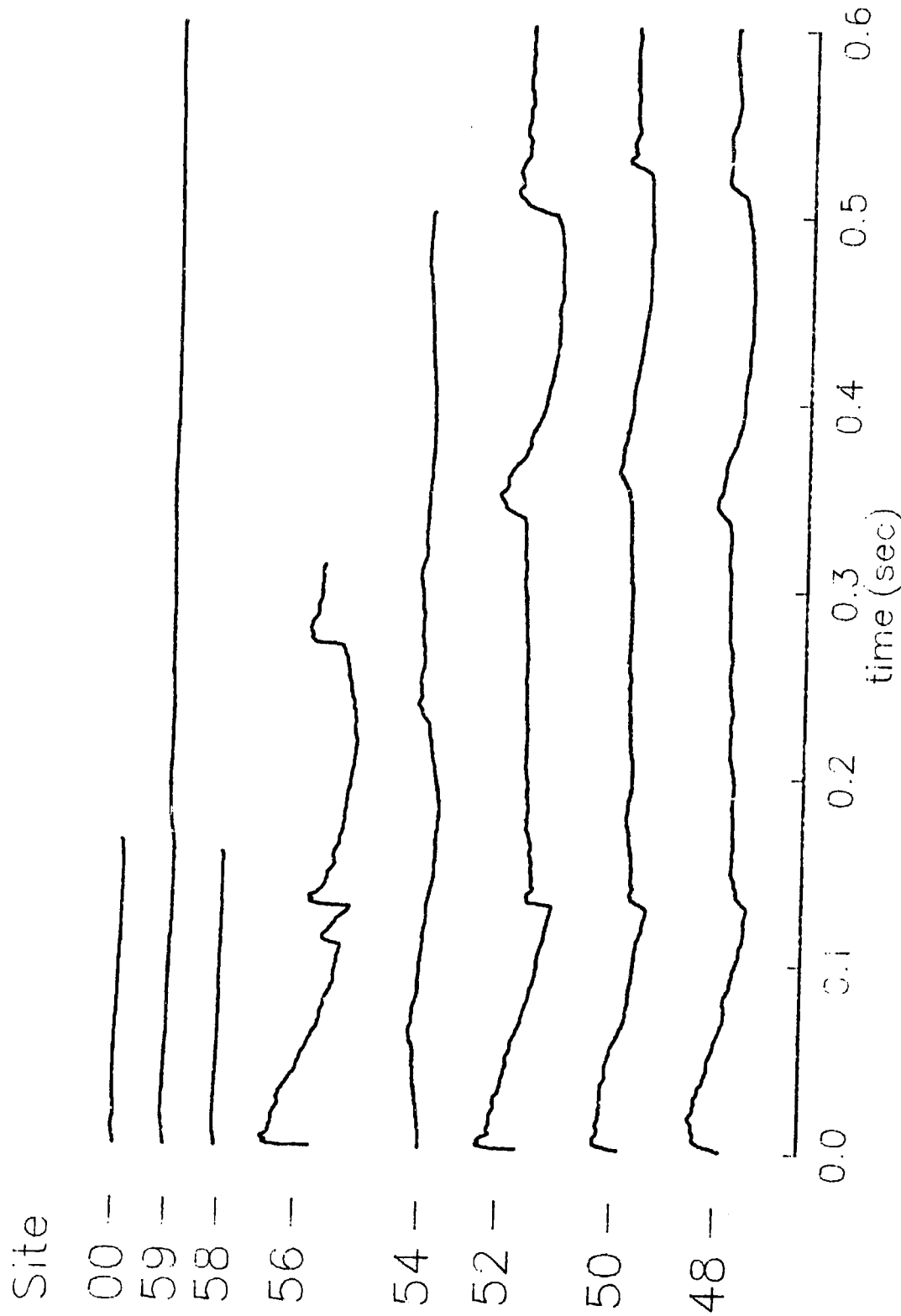


Figure D-39. F-14 on 6 Aug 87 at 0828

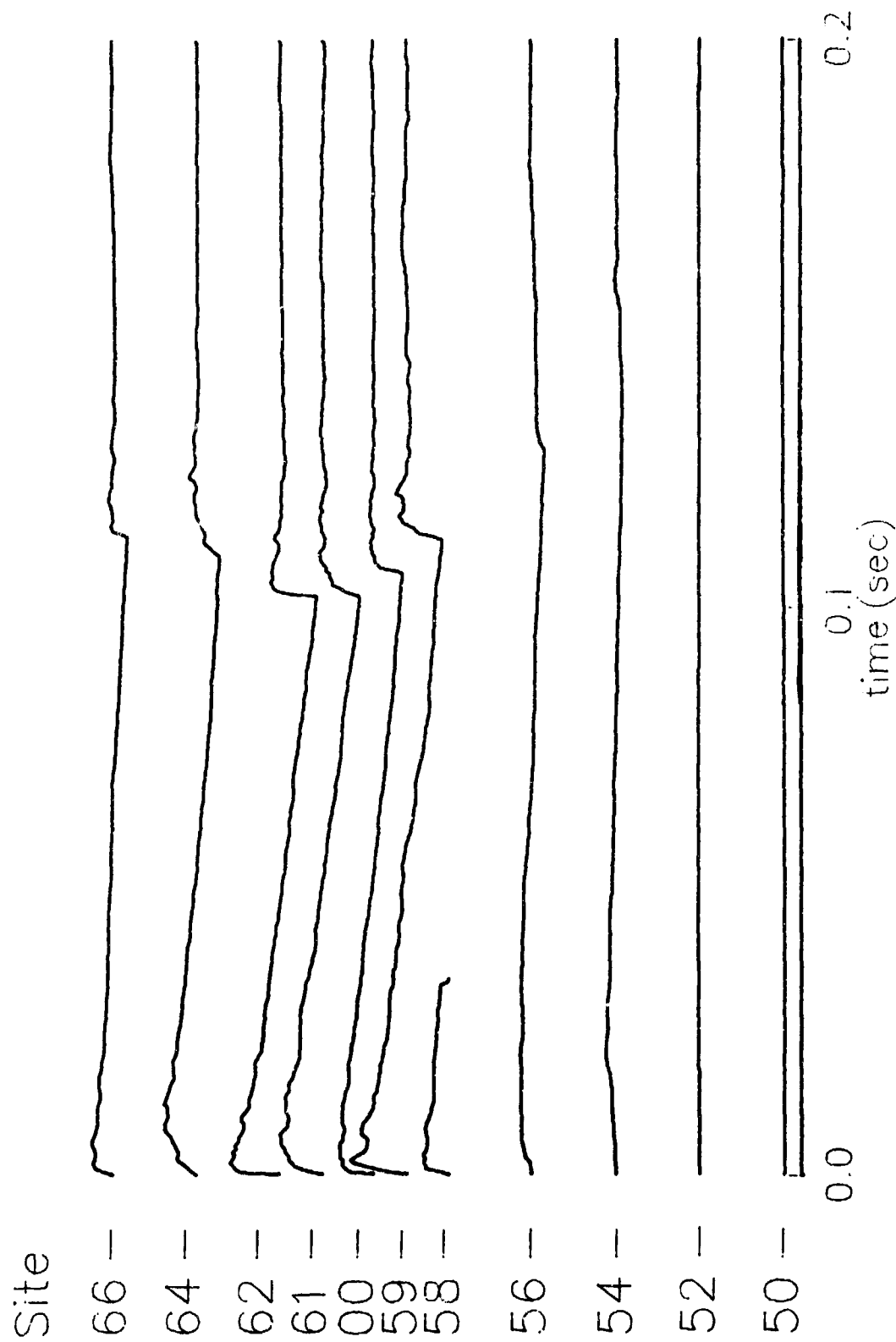


Figure D-40. F-14 on 6 Aug 87 at 1043

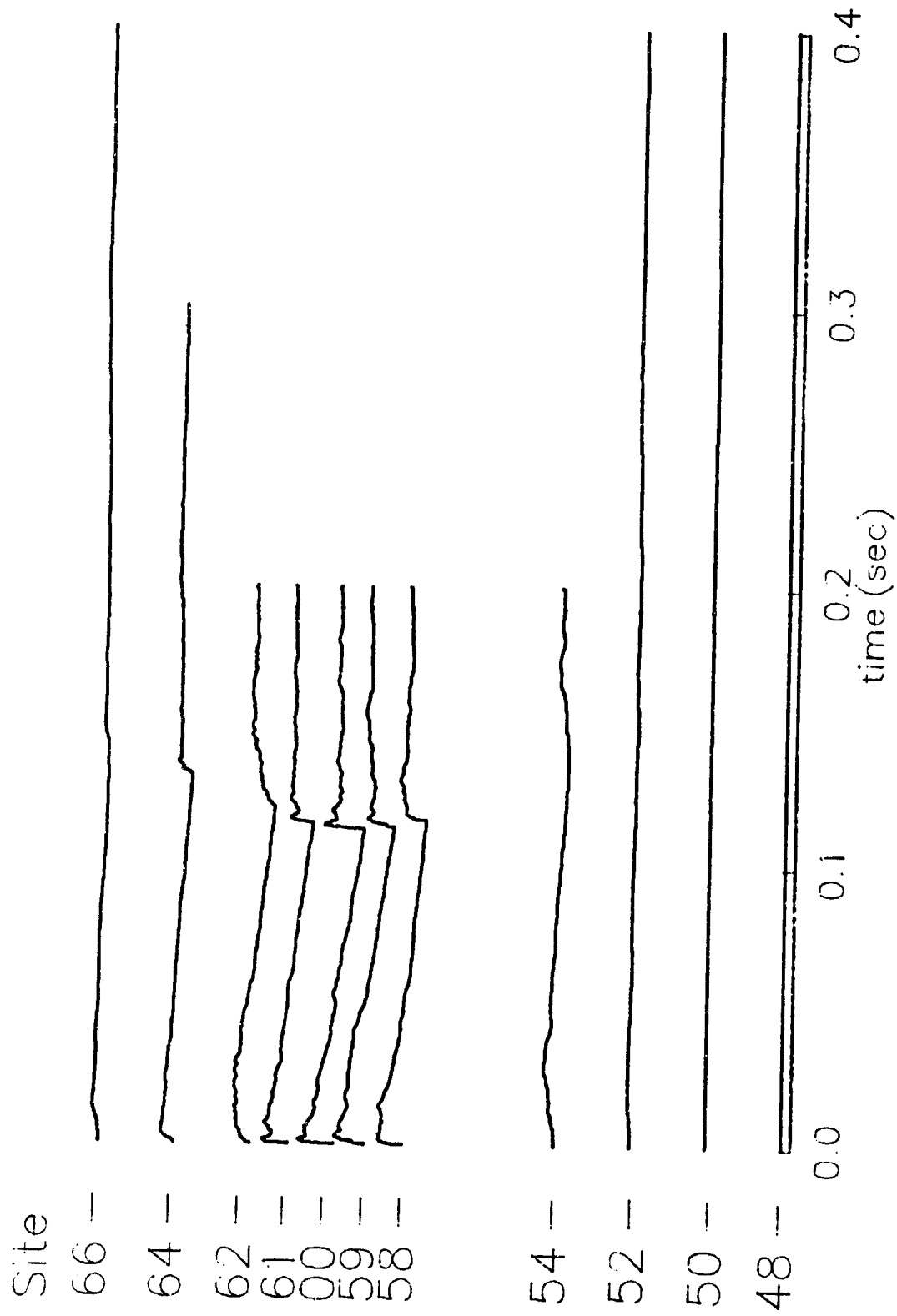


Figure D-41. F-111 on 6 Aug 87 at 1148

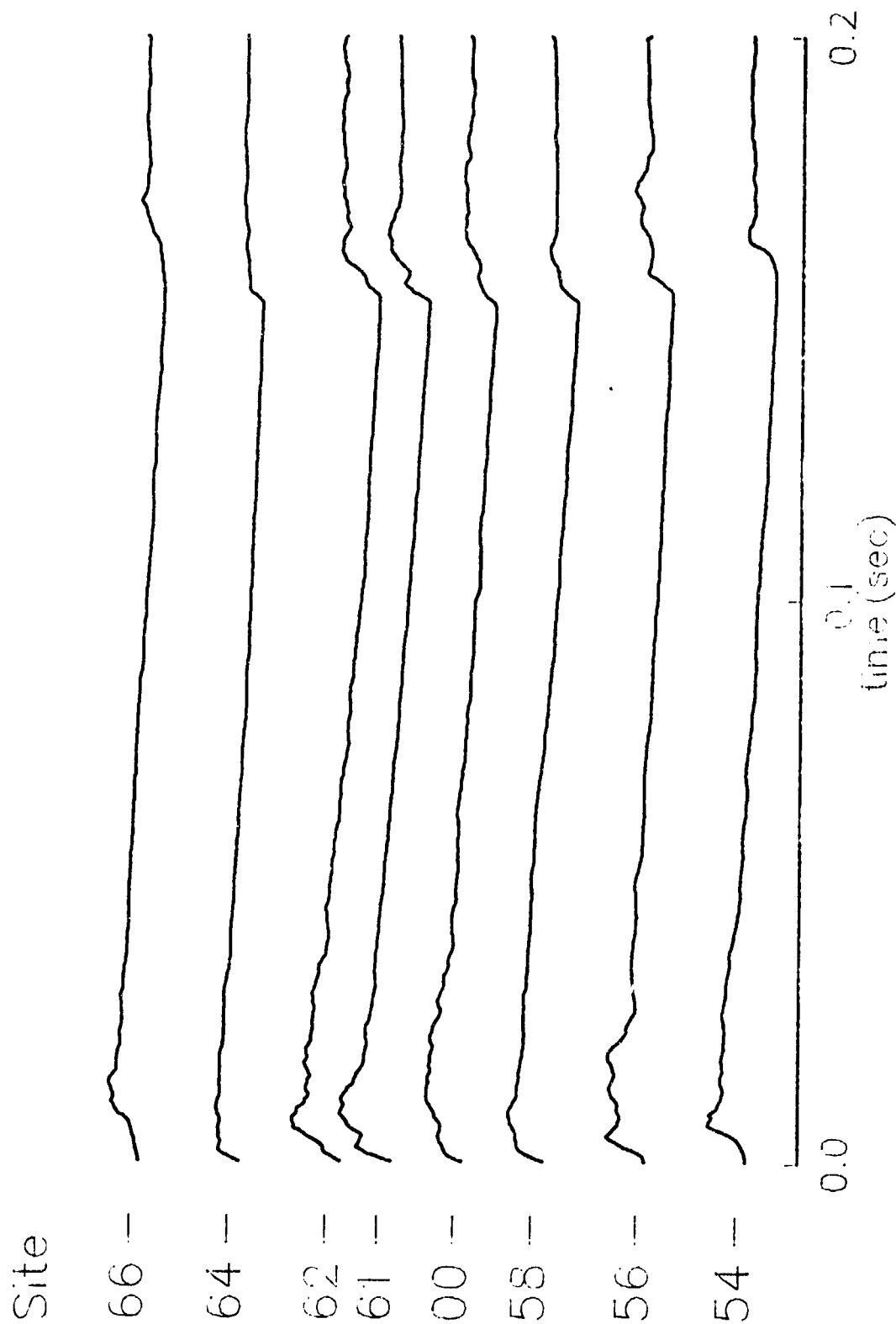


Figure D-42. F-111 on 6 Aug 87 at 1204

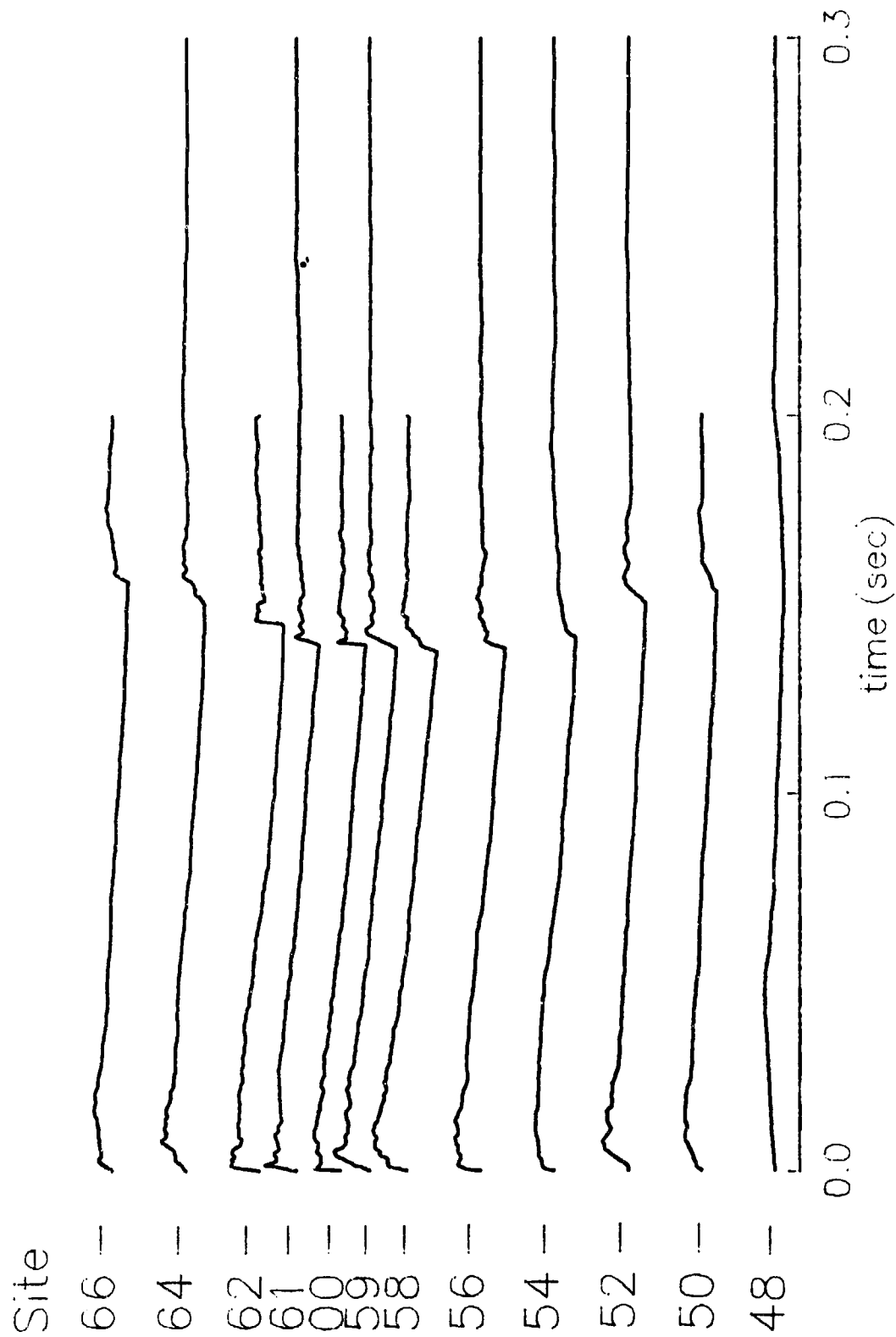


Figure D-43. F-111 on 7 Aug 87 at 1050



**APPENDIX E: Summary of Overpressures, ASEL, and CSEL Values**

# BEAR MILE MARKER

66 64 62 61 59.8 U.02 U4 59 58 56 55 54 53 52 51 50 48 44 42

8:41 7/31 F-4 at 1.2 Mach & 16 KMSL

BEAR	CSEL PEAK (DB) PEAK (PSF) SECONDS	106.8 131.7 1.6 28	109.8 134.5 2.2 22	111.2 136.1 2.7 21	113.8 138.2 3.4 20	113.4 137.4 3.1 19	111.9 136.4 2.7 18	114.1 138.7 3.6 18	110.5 136.0 2.6 20	107.8 133.3 1.9 24	104.3 130.8 1.4 27	R 97.2 124.4 0.7 31	R 86.7 109.1 0.1 32
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7:48 8/3 F-4 at 1.2 Mach & 28 KMSL

BEAR	CSEL PEAK (DB) PEAK (PSF) SECONDS	102.8 127.6 1.0 37	108.2 133.1 1.9 34	108.7 134.2 2.1 33	110.1 136.0 2.6 33	108.8 134.3 2.2 33	107.3 133.6 2.0 34	110.0 135.7 2.5 33	104.1 129.4 1.2 36	106.1 132.2 1.7 40	77.6 104.3 0.1 40	U 106.1 132.2 1.7 40	* * * 40
SBM-1	CSEL PEAK (DB) PEAK (PSF) SECONDS	108.0 132.5 1.8 35	108.0 133.5 2.0 28	111.0 137.5 3.1 11	111.0 137.5 3.1 11	106.5 132.0 1.7 33	106.5 132.0 1.7 33	100.5 127.0 0.9 36	* * * 36	* * * 36	* * * 36	* * * 36	* * * 36

7:58 8/3 F-4 at 1.3 Mach & 28 KMSL

BEAR	CSEL PEAK (DB) PEAK (PSF) SECONDS	100.6 126.6 0.9 39	104.7 130.6 1.4 35	111.3 136.3 2.7 33	111.1 136.2 2.9 33	112.1 137.2 3.0 33	111.4 136.1 2.7 32	109.2 134.5 2.2 32	105.8 131.7 1.6 37	99.8 128.0 1.0 41	98.0 125.4 0.8 43	* * * 43	* * * 43
SBM-1	CSEL PEAK (DB) PEAK (PSF) SECONDS	100.0 125.0 0.7 35	110.5 136.0 2.6 27	107.5 134.5 2.2 11	107.5 134.5 2.2 11	103.5 130.0 1.3 34	103.5 130.0 1.3 34	101.5 128.0 1.0 37	93.5 120.0 0.4 38	93.5 120.0 0.4 38	78.5 117.0 0.3 47,48	* * * 47,48	* * * 47,48

8:08 8/3 F-4 at 1.1 Mach & 13 KMSL

BEAR	CSEL PEAK (DB) PEAK (PSF) SECONDS	92.0 117.9 0.3 8	89.7 116.2 0.3 5	88.4 116.4 0.3 4	84.4 113.8 0.2 4	92.2 120.8 0.5 5	91.5 117.9 0.3 9	92.2 120.8 0.5 5	93.0 117.2 0.3 6	91.5 117.9 0.3 9	* * * 9	* * * 9	* * * 9
SBM-1	CSEL PEAK (DB) PEAK (PSF) SECONDS	90.5 115.3 0.2 4	92.0 120.5 0.4 -19	92.0 120.5 0.4 -19	92.0 120.5 0.4 -19	87.0 116.0 0.3 3	87.0 116.0 0.3 3	89.0 114.5 0.2 5	92.5 117.5 0.3 5	92.5 117.5 0.3 5	* * * 5	* * * 5	* * * 5

										BEAR MILE MARKER										
66	64	62	61	59.8	U.02	U4	59	58	56	55	54	53	52	51	50	48	44	42		
10:05 8/3 T-38 at 0.99 Mach & 13.3 kMSL																				
BEAR	CSEL						R	R												
	PEAK (dB)	*	*	*	85.1	86.2	84.2	77.1	*	*	*	*	*	*	*	*	*	*		
	PEAK (PSF)				109.8	107.6	110.3	105.0												
SBM-1	SECONDS				0.1	0.1	0.1	0.1												
	CSEL				35	36	36	35												
	PEAK (dB)						117.5			*	*	*	*	*	*	*	*	*		
	PEAK (PSF)						141.0													
	SECONDS						4.7	11												
	10:12 8/3 T-38 at 1.05 Mach & 12.7 kMSL																			
BEAR	CSEL																			
	PEAK (dB)	*	75.4	86.0	81.7	*	*	*	97.8	98.8	*	*	*	*	*	*	*	*		
	PEAK (PSF)		105.4	115.3	114.6				122.8	124.4										
SBM-1	SECONDS		0.1	0.2	0.2				0.6	0.7										
	CSEL		16	15	14				15	16										
	PEAK (dB)																			
	PEAK (PSF)																			
	SECONDS																			
	10:29 8/3 F-4 at 1.05 Mach & 12.9 kMSL																			
BEAR	CSEL																			
	PEAK (dB)	92.7	99.3	109.5	112.0	120.3	114.7	118.7	113.7	106.3	R	101.3	*	*	*	*	*	*		
	PEAK (PSF)	122.8	128.8	136.0	137.6	149.9	141.0	144.7	139.2	133.4		128.4								
SBM-1	SECONDS	0.6	1.2	2.6	3.2	13.0	4.7	7.1	3.8	2.0		1.1								
	CSEL	1:04	1:03	1:01	1:00	59	59	1:00	59	1:03		1:05								
	PEAK (dB)																			
	PEAK (PSF)																			
	SECONDS																			
	10:43 8/3 F-4 at 1.33 Mach & 43 kMSL																			
BEAR	CSEL																			
	PEAK (dB)	84.2	*	*	109.7	106.0	105.4	101.4	104.8	96.8	U	86.7	*	*	*	*	*	*		
	PEAK (PSF)	111.6			138.6	132.3	132.2	129.6	131.1	125.8		116.9								
SBM-1	SECONDS	0.2			3.6	1.7	1.7	1.3	1.5	0.8		0.3								
	CSEL	24			21	22	22	21	22	24		26								
	PEAK (dB)																			
	PEAK (PSF)																			
	SECONDS																			
	10:43 8/3 F-4 at 1.33 Mach & 43 kMSL																			
BEAR	CSEL																			
	PEAK (dB)	*			103.0			*				95.5	*	*	*	*	*	*		
	PEAK (PSF)				129.0			129.0				129.0								
SBM-1	SECONDS											1.2								
	CSEL																			
	PEAK (PSF)																			
	SECONDS																			
	10:43 8/3 F-4 at 1.33 Mach & 43 kMSL																			
	10:43 8/3 F-4 at 1.33 Mach & 43 kMSL																			

# BEAR MILE MARKER

	66	64	62	61	59.8	U.02	U4	59	58	56	55	54	53	52	51	50	48	44	42
	12:28	8/3	T-38 at 1.13 Mach & 28.2 KMSL																

BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	*	*	*	*	*	*	R 83.9 105.9 0.1 18	*	*	*	*	*	*	*	*	*	*	*
SBM-1	CSEL PEAK (dB) PEAK (PSF) SECONDS	*						*		*	*	*	*	*	*	*	*	*	*

BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	12:38	8/3	T-38 at 1.1 Mach & 20 KMSL															
		R																	
BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	83.2	*	99.8	96.5	96.9	*	R 98.9 89.7 121.5 116.5 0.5 0.3 17 17	*	*	*	*	*	*	*	*	*	*	*
SBM-1	CSEL PEAK (dB) PEAK (PSF) SECONDS	*						*		*	*	*	*	*	*	*	*	*	*

BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	7:19	8/4	AT-38 at 1.25 Mach & 39 KMSL															
BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	91.4	92.5	93.9	96.0	94.9	94.6	96.7	93.8	90.8	92.2	118.4	117.0	98.8	89.6	92.7	116.1	118.5	0.3
SBM-1	CSEL PEAK (dB) PEAK (PSF) SECONDS	*						88.5	119.0	0.4	33	16	118.0	0.3	*	*	*	*	*

BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	7:30	8/4	AT-38 at 1.18 Mach & 30.5 KMSL															
BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	90.3	93.8	91.4	94.3	95.6	94.8	99.1	91.6	92.4	92.0	117.6	123.4	97.1	*	*	*	*	*
SBM-1	CSEL PEAK (dB) PEAK (PSF) SECONDS	*						96.0	120.5	0.4	-16	91.5	115.5	81.5	*	*	*	*	*

# BEAR MILE MARKER

	66	64	62	61	59.8	U.02	U4	59	58	56	55	54	53	52	51	50	48	44	42
	7:36 8/4 AT-38 at 1.1 Mach & 15.1 KMSL																		
BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	93.9 120.0 0.4 47	98.8 124.0 0.7 46	101.5 126.6 0.9 46	100.4 125.1 0.8 46	97.7 123.1 0.6 45	97.0 122.6 0.6 45	98.8 124.3 0.7 47	97.6 121.6 0.5 49	91.1 116.4 0.3 51	U 76.2 106.7 0.1 58	83.6 109.9 0.1 56	R 86.4 108.9 0.1 1:02						
SBM-1	CSEL PEAK (dB) PEAK (PSF) SECONDS	83.0 117.5 0.3 39		95.0 120.0 0.4 38		97.0 123.5 0.6 20					*	*	*	*	*	*	*	*	
	7:56 8/4 F-15 at 1.39 Mach & 39 KMSL																		
BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	99.1 125.8 0.8 45	104.1 130.8 1.3 44	104.2 130.3 1.4 42	104.5 130.8 1.4 42	103.9 130.1 1.3 42	100.0 126.7 0.9 44	100.4 128.1 1.1 45	102.9 128.9 1.2 48		*	108.2 135.6 2.5 54	91.9 118.0 0.3 59	84.9 112.2 0.2 59					
SBM-1	CSEL PEAK (dB) PEAK (PSF) SECONDS	97.5 124.5 0.7 38		102.5 130.0 1.3 35		104.0 131.5 1.6 19						96.5 124.5 0.7 41	97.0 124.0 0.7 45	99.0 127.0 0.9 47		*	*	*	
	8:04 8/4 F-15 at 1.2 Mach & 28 KMSL																		
BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	106.1 132.2 1.7 10	103.6 129.5 1.3 9	105.9 134.0 2.1 7	106.8 131.4 1.6 6	105.9 132.9 1.8 5	106.3 131.9 1.6 7	107.0 132.5 1.8 8	105.2 130.6 1.4 10		*	101.6 127.2 1.0 15	89.4 115.7 0.3 20	94.4 120.5 0.4 24					
SBM-1	CSEL PEAK (dB) PEAK (PSF) SECONDS	104.5 131.0 1.5 2		105.0 131.5 1.6 -2		105.0 132.5 1.8 -19						100.5 126.5 0.9 3	94.5 121.0 0.5 6	86.0 119.0 0.4 8	82.0 117.5 0.3 15	*	*	*	
	8:10 8/4 F-15 at 1.14 Mach & 12 KMSL																		
BEAR	CSEL PEAK (dB) PEAK (PSF) SECONDS	98.0 127.3 1.0 20	108.4 135.3 2.4 18	112.7 138.1 3.3 15	113.3 138.2 3.4 13	112.8 137.7 3.2 13	112.8 138.2 3.4 16	106.3 133.7 2.0 17	105.5 131.3 1.5 19		100.0 126.8 0.9 21	R 78.8 105.9 0.1 26	U 81.9 107.3 0.1 34						
SBM-1	CSEL PEAK (dB) PEAK (PSF) SECONDS	94.5 124.5 0.7 11		112.0 137.0 3.0 6		113.5 141.5 5.0 -12						101.5 128.0 1.0 11	96.0 122.5 0.6 14	92.0 123.5 0.6 17		*	*	*	

		66	64	62	61	59.8	U.02	U4	58	56	55	54	53	52	51	50	48	44	42
		BEAR MILE MARKER																	
		9:14 8/4 AT-38 at 1.18 Mach & 28.7 KMSL																	
BEAR	CSEL	94.4	93.2	102.6	99.1	99.8	99.4		100.9	98.9	105.2		97.3			86.9	85.8		
	PEAK (dB)	119.7	119.6	127.1	124.7	124.8	124.2		125.7	124.5	130.5		122.6			114.1	112.9		
	PEAK (PSF)	0.4	0.4	0.9	0.7	0.7	0.7		0.8	0.7	1.4		0.6			0.2	0.2		
SBM-1	SECONDS	11	9	7	6	6	5		7	6	8		10			18	23		
	CSEL	89.0			98.3			84.5					78.5						
	PEAK (dB)	117.5			122.5			120.5					115.5						
SBM-1	PEAK (PSF)	0.3			0.6			0.4					0.2						
	SECONDS	3			-2			-20					4						
		9:23 8/4 AT-38 at 1.1 Mach & 13.2 KMSL																	
BEAR	CSEL	91.7	86.0	95.1	100.1	101.3	100.9		102.0	96.1	91.7		90.7			90.6	84.3		
	PEAK (dB)	119.6	112.9	120.8	125.2	128.6	128.2		128.4	122.1	118.8		117.5			118.1	112.2		
	PEAK (PSF)	0.4	0.2	0.5	0.8	1.1	1.1		1.1	0.5	0.4		0.3			0.3	0.2		
SBM-1	SECONDS	20	17	16	15	15	14		15	15	17		18			26	31		
	CSEL	84.5			99.0			100.0					88.5						
	PEAK (dB)	116.5			127.0			127.5					118.0						
SBM-1	PEAK (PSF)	0.3			0.9			1.0					0.3						
	SECONDS	11			7			-12					13						
		10:46 8/4 F-15 at 1.16 Mach & 15 KMSL																	
BEAR	CSEL	107.8	110.6	113.8	113.9	116.5	117.6		112.4	110.4	107.7		98.5			85.0	87.5		
	PEAK (dB)	133.8	137.1	140.2	138.2	142.7	145.5		138.1	136.1	134.8		127.3			112.3	110.4		
	PEAK (PSF)	2.0	3.0	4.2	3.4	5.7	7.8		3.4	2.7	2.3		1.0			0.2	0.1		
SBM-1	SECONDS	22	20	16	15	15	15		17	17	22		25			33	38		
	CSEL	106.0			115.0			110.0					88.5						
	PEAK (dB)	131.0			142.5			138.5					120.0						
SBM-1	PEAK (PSF)	1.9			5.6			3.5					0.4						
	SECONDS	14			7			-9					18						
		11:02 8/4 F-15 at 1.32 Mach & 29 KMSL																	
BEAR	CSEL	101.2	104.0	107.3	108.5	108.0	107.4		104.7	106.4	106.1		99.2			93.8	98.9		
	PEAK (dB)	128.7	129.9	133.4	136.1	134.0	132.9		130.7	133.2	133.1		127.5			123.7	126.8		
	PEAK (PSF)	1.1	1.3	2.0	2.7	2.1	1.9		1.4	1.9	1.9		1.0			0.6	0.9		
SBM-1	SECONDS	24	22	18	17	18	16		19	17	20		23			33	39		
	CSEL	99.5			106.0			104.0					97.0						
	PEAK (dB)	126.5			133.0			124.0					127.0						
SBM-1	PEAK (PSF)	0.9			1.9			2.1					0.9						
	SECONDS	16			9			-7					17			20	30		

BEAR MILE MARKER

	66	64	62	61	59.8	U.02	U4	59	58	56	55	54	53	52	51	50	48	44	42
	11:11	8/4	F-15 at 1.45 Mach & 43 KMSL																

BEAR	CSEL	98.9	99.6	99.6	99.6	99.2	100.6	98.7	101.8	104.2	90.9	84.7							
	PEAK (dB)	127.3	126.1	126.4	126.7	127.2	127.5	127.1	129.2	130.8	118.4	114.0							
	PEAK (PSF)	1.0	0.8	0.9	0.9	1.0	1.0	0.9	1.2	1.4	0.3	0.2							
	SECONDS	23	23	24	25	28	26	29	31	33	34	44							
SBM-1	CSEL	96.0				96.5	96.5				95.0	85.0							
	PEAK (dB)	124.5				124.0	128.5				123.5	119.0							
	PEAK (PSF)	0.7				0.7	1.1				0.6	0.4							
	SECONDS	15				20	4				30	34							

	11:34	8/4	F-15 at 1.45 Mach & 43 KMSL																
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BEAR	CSEL	77.5	99.0	101.6	106.7	106.4	104.5	101.6	102.1	101.5	100.8	96.6							
	PEAK (dB)	107.9	126.3	128.2	134.0	133.0	130.4	127.7	128.8	129.5	120.4	125.0							
	PEAK (PSF)	0.1	0.9	1.1	2.1	1.9	1.4	1.0	1.1	1.2	1.1	0.7							
	SECONDS	26	24	22	21	21	20	23	22	25	27	31							
SBM-1	CSEL	101.0				104.0	95.5				100.0	93.0							
	PEAK (dB)	128.0				132.0	126.0				129.0	123.5							
	PEAK (PSF)	1.0				1.7	0.8				1.2	0.6							
	SECONDS	19				13	-2				18	21							

	9:36	8/5	F-16 at 1.25 Mach & 27.8 KMSL																
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BEAR	CSEL	100.6	96.0	102.9	104.4	101.5	99.9	105.3	107.0	105.0	102.7	104.9							
	PEAK (dB)	126.3	123.5	128.1	129.6	128.0	127.3	130.4	132.6	131.2	129.9	130.0							
	PEAK (PSF)	0.9	0.6	1.1	1.3	1.1	1.0	1.4	1.8	1.5	1.3	1.3							
	SECONDS	13	10	7	6	5	5	6	5	6	9	14							
SBM-1	CSEL	98.5				99.0	105.5				102.0	106.0							
	PEAK (dB)	124.5				125.0	132.0				128.0	132.5							
	PEAK (PSF)	0.7				0.7	1.7				1.0	1.8							
	SECONDS	1				-5	-22				-3	0							

	9:25	8/5	SR-71 at 2.6 Mach & 66 KMSL																
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BEAR	CSEL	100.0	100.2	101.2	103.7	102.8	103.0	102.5	104.4	102.1	99.9	99.0							
	PEAK (dB)	126.4	126.7	127.7	130.0	128.9	129.0	128.5	130.8	128.0	126.8	125.5							
	PEAK (PSF)	0.9	0.9	1.0	1.3	1.2	1.2	1.1	1.5	1.1	0.9	0.8							
	SECONDS	18	15	12	13	12	12	15	14	17	21	26							
SBM-1	CSEL	95.5				97.0	97.5				93.5	93.5							
	PEAK (dB)	125.5				126.5	127.5				123.5	124.5							
	PEAK (PSF)	0.8				0.9	1.0				0.6	0.7							
	SECONDS	8				3	-6				8	12							

	66	64	62	61	59.8	U.02	U4	59	58	56	55	54	53	52	51	50	48	44	42
	9:33	8/5	F-16 at 1.37 Mach & 42.3 KMSL																
CSEL	100.1	102.3	100.9	103.9	100.1	101.5		100.6	101.3	99.2		99.3		97.7		87.3	87.4		
PEAK (dB)	126.4	129.1	126.9	130.3	126.2	127.0		127.1	127.2	126.0		126.6		125.8		116.1	115.4		
PEAK (PSF)	0.9	1.2	0.9	1.4	0.9	0.9		0.9	1.0	0.8		0.9		0.8		0.3	0.2		
SECONDS	1:03	59	56	56	54	54		56	55	57		59		1:02		1:06	1:09		
CSEL	99.0				97.0		96.0				96.5		99.0		97.5		81.0	*	*
PEAK (dB)	125.5				123.5		126.0				123.5		125.5		127.5		116.0	*	*
PEAK (PSF)	0.8				0.6		0.8				0.6		0.8		1.0		0.3		
SECONDS	52				45		29				47		50		52		59		
	9:44	8/5	F-16 at 1.2 Mach & 18.4 KMSL																
CSEL	101.5	104.9	112.2	108.6	111.6	110.5		108.9	113.0	108.3		110.6		92.0		R 88.4	82.3		
PEAK (dB)	127.6	131.3	140.4	134.9	136.3	135.7		134.3	138.4	135.9		137.8		121.8		113.4	106.1		
PEAK (PSF)	1.0	1.5	4.4	2.3	2.7	2.5		2.2	3.5	2.6		3.2		0.5		0.2	0.1		
SECONDS	1:00	57	53	53	51	52		53	52	55		58		1:02		1:07	1:12		
CSEL	99.0				109.5		109.5				105.0		101.5					*	*
PEAK (dB)	126.5				134.0		136.0				133.5		128.0		*			*	*
PEAK (PSF)	0.9				2.1		2.6				2.0		1.0						
SECONDS	49				41		24				45		49						
	10:55	8/5	SR-71 at 3 Mach & 73 KMSL																
CSEL	99.2	98.6	96.3	99.6	97.0	97.9		99.5	99.6	98.8		98.6		99.3		98.5	96.9		
PEAK (dB)	125.8	125.9	124.4	126.3	125.7	125.1		126.5	126.3	125.7		125.0		127.0		125.4	123.7		
PEAK (PSF)	0.8	0.8	0.7	0.9	0.8	0.8		0.9	0.9	0.8		0.7		0.9		0.8	0.6		
SECONDS	15	12	11	12	12	11		14	13	16		20		24		30	36		
CSEL	94.5				91.5		93.5				92.0		90.5		84.0		93.5	89.0	83.0
PEAK (dB)	123.5				123.0		125.0				123.0		124.5		121.0		123.5	119.5	119.0
PEAK (PSF)	0.6				0.6		0.7				0.6		0.7		0.5		0.6	0.4	0.4
SECONDS	5				1		-6				7		10		14		25	39	45
	11:08	8/5	SR-71 at 1.25 Mach & 30 KMSL																
CSEL	106.5	109.6	114.5	110.4	107.0	106.5		109.9	108.4	108.2		107.8		106.3		110.8	*		
PEAK (dB)	132.8	135.8	139.4	136.0	134.4	132.7		136.9	135.6	134.2		133.6		133.2		137.1	*		
PEAK (PSF)	1.8	2.6	2.9	2.6	2.2	1.6		2.9	2.5	2.1		2.0		1.9		3.0			
SECONDS	45	43	40	40	38	39		41	39	41		44		48		53			
CSEL	99.5				104.5		105.0				105.0		102.0		102.0		92.5	*	*
PEAK (dB)	131.5				132.0		135.0				131.0		128.5		128.5		118.5	*	*
PEAK (PSF)	1.6				1.7		2.3				1.5		1.1		1.1		0.4		
SECONDS	35				28		12				31		35		31		47		



# BEAR MILE MARKER

	66	64	62	61	59.6	U.02	U4	59	58	56	55	54	53	52	51	50	48	44	42
	11:44	8/5	F-16 at 1.16 Mach & 13.1 KMSL																
BEAR	R	94.0	103.5	113.5	107.0	116.4	115.5	111.4	116.3	109.7	102.6		R	87.5					
		120.1	129.5	141.3	133.4	142.3	141.8	137.6	140.2	136.2	128.5			113.8		*			
		0.4	1.2	4.8	1.9	5.5	5.1	3.2	4.3	2.7	1.1			0.2					
		31	29	26	26	24	24	24	24	28	31			33					
SBM-1		82.0				113.5	112.5	112.5			101.0			82.5					
		120.0				140.0	143.5	143.5			128.0			115.5	*		*	*	*
		0.4				4.2	6.2	6.2			1.0			0.2					
		22				13	-4	-4			18			21					
	11:54	8/5	F-16 at 1.14 Mach & 12.6 KMSL																
BEAR		97.5	108.6	106.3	110.6	114.4	113.9		110.6	99.8			R	79.4					
		124.9	133.3	132.2	135.7	138.9	139.0	*	136.2	128.4	*			108.2		*			
		0.7	1.9	1.7	2.5	3.7	3.7		2.7	1.1				0.1					
		47	44	41	40	39	39		42	44				50					
SBM-1		94.0				111.5	110.5				89.0								
		121.0				136.5	139.0				119.5		*		*	*	*	*	*
		0.5				2.8	3.7				0.4								
		36				29	12				35								
	12:04	8/5	F-16 at 1.25 Mach & 28 KMSL																
BEAR		105.3	102.6	106.8	105.3	108.0	109.3	103.4	104.6	104.5	101.4			101.2		92.5			
		133.8	128.8	132.8	130.5	132.9	134.9	129.8	130.8	130.2	128.1			127.4		118.1	*		
		2.0	1.1	1.8	1.4	1.8	2.3	1.3	1.5	1.4	1.1			1.0		0.3			
		53	50	47	47	46	47	48	48	51	54			58		1.03			
SBM-1		102.0				105.5	104.5				99.0					88.5			
		132.0				131.0	132.5				126.5			122.5		121.0	*	*	*
		1.7				1.5	1.8				0.9			0.6		0.5			
		43				36	20				41			45		47			
	12:35	8/5	SR-71 at 1.1 Mach & 50 KMSL																
BEAR		106.4	101.5	103.3	105.1	104.3	103.3	102.5	104.9	100.0	96.3			102.1			*		
		134.3	127.3	129.4	130.5	129.8	129.4	130.4	131.1	128.4	124.9			129.3					
		2.2	1.0	1.2	1.1	1.3	1.2	1.4	1.5	1.1	0.7			1.2					
		50	49	48	49	51	50	54	54	59	1:03			1:09					
SBM-1		101.5				101.0	94.0				100.0			92.5		91.5		81.5	89.5
		134.0				128.0	128.0				130.0			121.5		123.5		116.0	119.5
		2.1				1.0	1.0				1.3			0.5		0.6		0.3	0.4
		40				40	28				49			55		59		1:12	1:26

BEAR MILE MARKER																			
	66	64	62	61	59.8	J.02	U4	59	58	56	55	54	53	52	51	50	48	44	42
7:44 8/6 F-18 at 1.3 Mach & 28 KMSL																			
BEAR	CSEL	103.6	104.7	106.6	106.3	107.9	108.1	108.3	108.1	115.7		92.1	U	85.1					
	PEAK (dB)	128.8	129.6	131.5	131.5	132.9	133.1	133.2	132.6	141.0		117.4		114.7		*			
	PEAK (PSF)	1.1	1.3	1.6	1.6	1.8	1.9	1.9	1.8	4.7		0.3		0.2					
	SECONDS	17	14	12	12	12	11	13	14	18		18		17					
SBM-1	CSEL	101.5				106.0	105.5				99.5				*		*	*	*
	PEAK (dB)	127.5				130.5	131.5				126.5								
	PEAK (PSF)	1.0				1.4	1.6				0.9								
	SECONDS	4				0	-15				6								
7:57 8/6 F-18 at 1.43 Mach & 42.7 KMSL																			
BEAR	CSEL	100.4	101.2	102.5	102.1	105.0	105.1	102.7	102.9	103.7		104.4		93.0	U	88.6			
	PEAK (dB)	126.5	126.7	127.9	127.7	130.4	130.4	129.0	128.8	129.0		130.6		121.4		112.6	*		
	PEAK (PSF)	0.9	0.9	1.0	1.0	1.4	1.4	1.2	1.2	1.2		1.4		0.5		0.2			
	SECONDS	13	9	6	5	5	4	5	5	6		8		10		12			
SBM-1	CSEL	98.0				102.0	100.0				98.5		96.5		101.0			*	*
	PEAK (dB)	125.0				128.0	128.0				123.5		124.5		126.5				
	PEAK (PSF)	0.7				1.0	1.0				0.6		0.7		0.9				
	SECONDS	0				-7	-23				-5		-3		-4				
8:10 8/6 F-18 at 1.08 Mach & 13 KMSL																			
BEAR	CSEL	99.6	99.0	106.4	108.4	114.0	113.2	1'4.5	115.8	114.0		106.0			R	90.8	79.3		
	PEAK (dB)	125.9	127.4	132.8	134.2	138.9	138.4	139.8	140.5	139.0		132.3	*			112.0	105.8		
	PEAK (PSF)	0.8	1.0	1.8	2.1	3.7	3.5	4.1	4.4	3.7		1.7				0.2	0.1		
	SECONDS	46	42	39	38	36	37	37	36	36		40				46	50		
SBM-1	CSEL	97.0				112.0	109.5				112.5		103.0		*		*	*	*
	PEAK (dB)	122.0				137.0	137.0				138.0		132.5						
	PEAK (PSF)	0.5				3.0	3.0				3.3		1.8						
	SECONDS	32				24	7				26		28						
8:28 8/6 F-14 at 1.15 Mach & 28 KMSL																			
BEAR	CSEL	*	*	*	*	80.2	*	82.0	98.2	104.2		101.5		102.0		97.5	97.5		
	PEAK (dB)					107.6	*	109.1	124.5	128.9		128.2		126.6		122.7	124.4		
	PEAK (PSF)					0.1		0.1	0.7	1.2		1.1		0.9		0.6	0.7		
	SECONDS					45		47	1:00	59		1:01		1:03		1:07	1:12		
SBM-1	CSEL	*				*	*				99.5		99.0		99.0		92.5	93.5	88.0
	PEAK (dB)										124.5		128.0		120.0		122.0	122.0	117.0
	PEAK (PSF)										0.7		1.0		0.9		0.4	0.5	0.3
	SECONDS										48		49		50		59	1:09	1:15